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ABSTRACT

This publication contains workshop papers which discuss the link between the labor market and vocational training. Part I provides an overview of the workshop--its objectives, issues, and conclusions. Part II consists of seven country papers. "Labour Market Information (LMI) and Vocational Training Decision-Making in Hungary" (Lazar) outlines types of LMI to help vocational education and training (VET) planning and problems concerning LMI and its use for VET decision-making. "Labour Market Needs in Adult Training Programmes in Hungary" (Fodor) discusses the labor market training system and developing company-specific training programs. "Regional Employment and Training Observatory in France" (Guegnard, Perrier-Cornet) focuses on the observatory in Burgundy, an inter-institutional network. "New Methods for Linking VET with the Labour Market in Poland: The Results of a Pilot Application" (Kabaj) focuses on two methods: monitoring of shortage and surplus occupations and tripartite training agreements. "The Future of Skills and Work: Trends and Forecasts in Germany" (Tessaring) concludes that structural change in industry and society is accompanied by a major increase in the qualification requirements of the workforce. "Challenges of Incorporating Labour Market Requirements in the Vocational Training System: Slovenia" (Kramberger) provides a summary of broader processes that influence reform attempts to improve the VET system. "Linking Labour Market Analysis and Vocational Training in the United Kingdom" (Edgell) covers the sort of analysis undertaken at the national level. Part III has four discussion papers. "The Identification of Relevant LMI for VET" (Meijers) elaborates on the need for LMI in an industrial society and describes a new qualification model. "Labour Market Forecasts on Behalf of the VET System" (de Grip) focuses on the kind of LMI required to improve the transparency of the labor market and reestablish coordination between the labor market and VET system in the former centrally planned economies of Central and Eastern Europe. "Qualitative Information for Curriculum Development" (Dybowski) discusses

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ways to ensure that curricula remain up-to-date. "Linking Labour Market Analysis to Vocational Training Decision-Making: Dynamics and Mechanisms" (Mozdzenska-Mrozek) presents emerging links between VET and the labor market, institutions collecting and shaping information on the labor market situation in Poland, and VET reform in Poland. Contributor notes are appended. (YLB)

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REPORT

Linking Labour Market Analysis and Vocational Training

European Training Foundation

CE 079 008

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A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (http://europa.eu.int).

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Foreword

This publication has been produced in the context of one of the projects funded by the Phare Programme and managed by the European Training Foundation. It is the follow-up to a two and a half day workshop entitled 'Linking Labour Market Analysis and Vocational Training' which took place in Turin, Italy, on 20 - 22 November 1997.

Thirty-one participants representing sixteen countries attended the workshop. The thematic papers and the six country papers presented are reprinted in this document to provide a framework for focused follow-up activities in the partner countries.

The assumption behind the workshop was that information on the demand and supply of skills is a prerequisite for vocational education and training decision makers to allow them to adapt their systems to the needs of a changing socio-economic environment.

In the previously centrally planned economies of the partner countries, there was an inherently close link between production and training systems. Following the abolition of this centrally planned system, this close link, and the interrelated link between skill users and skill producers, was broken. At the same time neither effective instruments/ mechanisms nor appropriate institutions have yet been set up to re-establish a functioning link within the framework of a market economy. The growing private sector, emerging from the privatisation of large state enterprises and the setting up of SME's, does not as yet communicate directly and effectively with vocational education and training institutions and decision makers.

As a consequence, vocational education and training decision makers in the partner countries are now facing a serious information gap between the skills required by society and the economy to proceed to a structural adaptation of their system and to design appropriate training programmes.

Labour market analysis is considered to be an essential tool for answering these questions.

PART I

Overview of the Workshop

The workshop 'Linking Labour Market Analysis and Vocational Training' brought together vocational training experts, practitioners and decision makers, with labour market analysts from both partner countries and EU Member States to discuss a complex, difficult but essential topic: the link between the **labour market and vocational training**.

1. *Background*

The objectives of the workshop were:

- to identify challenges that partner countries are facing so as to develop, use and disseminate labour market information for effective vocational education and training decision making;
- to inform about practices and achievements in EU Member States and partner countries to deal with those challenges; and
- to elaborate recommendations for the (further) development of labour market analysis targeted to the adaptation of vocational education and training to the new needs in the partner countries.

During a preparatory round table expert meeting in Turin in November 1996, four central themes were identified to be discussed in more detail during the workshop. These themes, together with six country case history presentations formed the basis for the plenary and syndicate group discussions of the workshop:

- identifying relevant labour market information for vocational education and training: a user oriented approach;
- quantitative information and structural adaptation of vocational education and training systems, the philosophy and implementation of forecasting and monitoring of evolution in skills, qualifications and occupations;
- qualitative information for curriculum development; (core) skill and attitudinal requirements at the work place; and
- linking labour market analysis to vocational education and training decision making: dynamics and mechanisms, including role of actors (e.g. social partners) and of intermediary institutions.

The relevance of this topic is entwined with the main objective of vocational training which is to prepare people for employment. Accordingly, the task of vocational training decision makers is to ensure a good, or the best possible, **relationship between vocational training and employment**.

For a number of interconnected reasons this is no easy task:

1. **The relationship between training and employment is becoming more and more complex.** Today a particular job can be carried out by individuals whose qualifications may be quite different. By the same token the same qualification can give access to a range of different jobs. Nevertheless, training, and the qualification to which it leads, often does not ensure employment. A number of other factors, such the personality of the individual, the overall level of employment, etc. will influence recruitment.

2. **Uncertainty about future jobs and related tasks**. Economic fluctuations, rapid changes in the structure of the economy, technological changes and resulting modifications of production and work organisation, and other factors, create an environment of uncertainty for both enterprises and individuals. Enterprises need to adapt to new situations and cannot be certain of the level of their output, the organisation of work, the number of people they will recruit in the future and the type of skills they will need.

3. **A large number of actors are getting involved to ensure a good relationship between training and employment**. On one side are the training providers, who prepare people for employment, and on the other are the economic organisations/employers, who recruit people. Moreover, as a result of the tendency in almost all countries to decentralise and share responsibilities among different actors, the number of actors involved in the decision making process for training provision is becoming larger and larger (regional authorities, Ministries of Education and Labour/Employment, schools, training centres, local employment offices, etc.). Ideally, decision making to ensure a good match between employment and training should be shared by the different actors through permanent communication and interaction. However, practice shows that collaboration is difficult, and far from perfect, thus creating inflexibility and inefficiency within the training system.

It is worthwhile mentioning that these challenges face all modern market economies, and not only the partner countries whose experts this workshop addresses. In the EU Member States, and in all market economies the discussion on the relationship between training and employment (or correspondence between qualifications and occupations) has been going on for decades. This discussion became more intense during the period of unemployment and economic stagnation (the human factor as an element for competitiveness of enterprises and economies) (see discussion paper 1, p.xx).

Nevertheless, it should also be underlined that some of the above challenges are more pronounced in the partner countries due to the rapidity of change. For example, uncertainty about future jobs and tasks is greater as a result of economic restructuring and their repositioning in the global economy.

2. *Issues discussed*

In order to address the most important issues which the partner countries face, the workshop aimed at covering questions such as:

1. What are strengths and limits of labour market analysis in guiding decisions for vocational training? Messages coming from the labour market are often not clear enough or are misleading. Furthermore, the labour market demand for skills can be incorporated into the decision making process for vocational training, as social demand is for education.
2. What type of information can be obtained from the labour market which is relevant for vocational training?
3. How can this information be collected and with which instruments and mechanisms?
4. How can this information be analysed and interpreted?
5. How can it be incorporated into the decision making process for vocational training both at the strategic planning level (structural adaptation of the system) and the operational level (design of new training programmes)?
6. What are the obstacles and possibilities for transferring knowledge from labour market analysis (information producers) to vocational training decision makers (information users). Taking into account the multiplicity of actors involved in training, how can we ensure co-operation between, for example, training providers and social partners, analysts of labour market information and training decision makers? And which mechanisms instruments should be used.

3. *Main conclusions*

The rich and intensive discussions during the two and a half day workshop resulted in a number of conclusions which could be clustered in the following categories:

i. the framework of labour market analysis for vocational training

ii. the challenges for the partner countries

iii. recommendations for future development

3.1 *The framework of labour market analysis for vocational training*

The labour market is only one of the factors that shape the function and functioning of vocational education and training. The other factors are the economy as a whole, the education system, society at large and individual needs.

The main objective of vocational training, however, is to prepare individuals for employment. Hence the labour market is an important point of reference.

Accordingly, decision making for vocational training (including curriculum development, structural adaptation of the system and vocational guidance) needs to be based on sound labour market analysis in order to:

i. **monitor** actual labour market developments and the extent to which the training system responds to them, and

ii. **forecast** occupations and qualifications to identify future skill and training requirements.

In more detailed discussions about forecasting, it was emphasised that, in modern market economies forecasting can only provide early warning signs but does not provide a basis for 'mechanical' planning. In particular during periods of economic instability, longer term forecasts are only indications at very aggregate levels, whereas short-term forecasts are more reliable.

The traditional methods, concepts and parameters of labour market analysis are under scrutiny to see if and how they can capture changes that are actually taking place within the functioning of this market. Particular attention is paid to the following elements:

- a dynamic analysis of the labour market taking into account not only the actual situation (and requirements) but also processes, tendencies and trends;
- a combination of both quantitative and qualitative information on labour market developments;
- the increasing importance of qualitative information[1] (taking into account rapid changes in the organisation of the work place and the impact that this may have on the skills required);
- the profound rethinking of the clustering, e.g. of occupations, used for analysing the labour market (in particular in quantitative analyses);
- the development of information and analytical tools for capturing new occupations and occupations/professions that are strategic for the economy and atypical occupations.

Labour market information should aim at fulfilling the information needs of all vocational training decision makers and/or stakeholders, particularly:

- at national level (ministries, national organisations of social partners) for the development of national policies,
- at regional/local level (schools and training centres), and
- individuals enrolling in vocational training

3.2 *Challenges for the partner countries*

Although some progress has been made in a number of partner countries in analysing the labour market for vocational training purposes, a number of essential problems remain. The main problems identified include:

1. Lack of information. The privatisation process, the economic restructuring and the moving into a market economy has created uncertainty and information gaps on the needs of the labour market. All Phare countries collect information on labour market developments, e.g. on the number and characteristics of the employed, unemployed, people at risk of unemployment, etc. (the richness and reliability differs from country to country). Nevertheless, there is a lack of targeted information for vocational training, such as information on:

    - the demand for different occupations and their changing work content, on occupations that are disappearing or are emerging, etc.,

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[1] Qualitative information is that which describes the content of jobs, occupations/occupational families, tasks. It also describes processes.

- the employability and career opportunities of young people entering the labour market with different kinds of vocational qualifications, or of (re)trained people,
- future skills requirements (available information refers to past or present skill requirements).

2. Lack of analysis and studies. Even where general labour market information is available, it is not sufficiently analysed for vocational training purposes. It seems that in very few countries, such as Hungary and Poland, studies on the different aspects of the interaction between labour market and training have been undertaken, although they are either at an experimental level or their results are still sporadic. This lack of analyses is attributed to a number of factors, including certain fundamental aspects such as:

   - lack of expert knowledge on this interaction (experts either work on labour market issues or on training but rarely on their interaction);
   - limited knowledge of appropriate methodologies for bringing information together and undertaking these analyses;
   - ill-defined requests from vocational training providers who are often passive in expressing their information needs (for example it was mentioned that schools are interested in labour market information but they are not able to articulate the type of information they need);
   - difficulty in defining the qualitative elements of occupations and professions to be collected and analysed for vocational training purposes;
   - lack of available funds for the undertaking of these analyses.

3. Inefficiency of support mechanisms. It was recognised that there is a lack of co-operation between the different actors who could ensure the link between the labour market and vocational training. This lack of co-operation, or bad partnership among different stakeholders, is often due to the following factors:

   - weak legislative and/or institutional frameworks for ensuring co-operation,
   - insufficient ability and interest of the different stakeholders in understanding and addressing vocational training problems
   - divergence of objectives between education/training authorities, on the one hand, and employers or other employment authorities, on the other.

3.3 *Findings and Recommendations*

In order to respond to the above challenges the participants of the workshop came up with the following recommendations:

1. Developing a solid information base. This should ensure the availability of quantitative and qualitative information for:

   - monitoring the training system, the labour market, and the link between them;
   - forecasting skill requirements of the labour market and therefore, training needs

   In order to set up a solid information base, the need is not so much to establish and develop new information sources but rather:

i. build on existing information sources (such as registers of the unemployed kept by employment offices at regional and national level, regular household surveys, regular surveys to the enterprises, etc.) by adding questions/ parameters which fulfil the information needs of vocational training decision makers, and

ii. develop a mechanism which brings together information from different sources and feeds this information from the labour market into the training system on a permanent and regular basis (the French regional Observatories on Employment and Training can be a useful example).

At the same time, an overkill of information should be avoided. Information should be well targeted to the needs of the different decision makers and should be disseminated to them in time.

2. Supporting labour market analysis for vocational training. Actions include:

i. training researchers in universities and specialised institutes on how to conduct these analyses;

ii. developing methodologies for monitoring the labour market and vocational training, and the interaction between the two;

iii. identifying the short and long-term skill/training needs through the exchange of expertise between EU Member States and partner countries and also among the partner countries themselves;

iv. raising the awareness of vocational training decision makers (such as ministries of education, schools and other training providers, teachers and vocational guidance staff) to ensure that their decisions are based on well documented analyses and updated and relevant labour market information.

3. Strengthening the support mechanisms. The participants recommended that more importance be attached to:

i. improving the co-operation between the Ministry of Education and Ministry of Labour/Employment (and of their agencies at national, regional and local levels) in order to develop a coherent framework for training;

ii. organising partnerships between schools/training centres, on the one hand, and enterprises/employment centres, on the other at regional or local level;

iii. promoting social partnership at all levels in order to arrive at 'co-makership';

iv. providing a proper career guidance and counselling system.

In order to wholly implement these recommendations the countries have to develop an appropriate legislative and institutional framework. Moreover the different stakeholders should be educated to make them aware of how they have to contribute to the reforms.

Simultaneously, it is necessary to support the communication between:

- labour market information producers/analysts and vocational training producers/analysts so as to feed the findings of each sector into the other
- information producers/analysts and information users (vocational training decision makers) so as to ensure the usefulness and timely dissemination of the information developed.

A 'national challenge debate' could be instrumental in defining the priorities of the problems faced. This avoids jumping to conclusions and solutions without prior problem analysis.

All participants agreed that the various stakeholders should adopt a more 'client oriented approach'.

4. Networking of resources: It was generally agreed that existing information should be used more efficiently, including:
    i. paying more attention to events in neighbouring countries;
    ii. making use of modern technologies such as Internet Forums for discussions;
    iii. improving networking among members of the Foundation's Advisory Forum, the Phare Staff Development Programme correspondents and National Observatories.

The complete proceedings of this workshop can be downloaded from the Foundation's web site: http://www.etf.eu.int

PART II

Country Examples

Labour market information and vocational training decision-making in Hungary (György Lázár)

1. What kind of labour market information (LMI) do we have in Hungary that can help vocational education and training (VET) planning and decision-making?

   1.1. We have a relatively developed labour market information system which produces LMI regularly both on regional and national level:

   - monthly: publications on the labour market situation by county and on the national level, based on the data bases of registered unemployed, reported vacancies and use of active programmes, since 1990.
   - quarterly: publications on:
     - employment and unemployment (based on the Labour Force Survey) - on the national level by the Central Statistical Office (CSO) since 1992. From 1998 onwards, it is planned to publish national estimates on a monthly basis and regional estimates on a quarterly basis.
     - employment and earnings (based on CSO data and on a panel survey of NLC), since 1991.
   - twice a year: a comprehensive analysis of the labour market situation and trends (both on county and national level), since 1994.
   - twice a year: a short-term labour market projection based on a huge survey of employers' plans and expectations, since 1991.
   - twice a year: an evaluation of a monitoring system of active labour programmes and their former participants, since 1994.
   - annually: information on basic wages and total earnings (based on a huge representative survey of basic wages and earnings of individuals), since 1992.
   - a handbook of occupations, which also includes the necessary education, training and qualification by occupations.

   1.2. The Ministry of Labour has been working on medium and long-term forecasts of manpower supply and demand by occupational groups since 1992. (The first results were published in 1997, and the project is to be continued.)

1.3. There were a number of interesting labour market research projects which also produced some remarkable information for VET planning and decision-making:

- the follow-up surveys of former receivers of unemployment benefit, using different breakdowns of the target population including that of participation in labour market training and in other active programmes.
- research based on the files of unemployment benefit payments, supplemented with special representative surveys.
- research and analysis of the results of the different active programmes, using the net impact (comparison group) approach (in 1993 and 1997).
- analyses of changes in the wage rates and wage rate distribution during the transition period (1986-1996) by well-known researchers based on the huge data bases of the representative surveys on basic wages and total earnings of individuals.
- analyses based on different supplementary surveys attached to the Labour Force Survey, including supplementary surveys on the labour market situation of youth in 1996 and 1997.

2. Future plans on LMI relevant to VET decision-making

2.1. More detailed data processing and analysis of the information inherent in our huge data bases, including information on surplus supply by occupation and qualification, and the demand for labour by occupation.

2.2. Analysis of school leavers registered as unemployed, by educational level, type of school and qualifications, compared to the output of the school system broken down according to the same parameters.

2.3. Continuation of the analyses of the ample data base of the net impact survey of 1997, according to more detailed breakdowns of the samples (and the target population), and - if possible - cross country comparisons with Poland, the Czech Republic, and Turkey.

2.4. Development of a huge database system in the Ministry of Labour which will contain all the existing information useful for VET analysts (and be regularly updated).

3. Problems concerning LMI and its use for VET decision-making

3.1. The amount and variety of available LMI in Hungary is really impressive. One of the problems is whether this information reaches VET planners and decision-makers on the different levels , and if it does, whether they can find what they need in the overwhelming amount of information.

I am afraid that in most cases the correct answer to both questions is "no".

In my opinion this is due to the following reasons:

- the dissemination of LMI is too costly for the information providers , so the number of copies sent out is not sufficient.
- other ways of spreading the information (like Internet) are not yet available to many providers and users of this information. (Hopefully, this will improve in the near future).

- for those who receive most of the existing Labour Market Information it is not easy to find what is really important to them. (The data base system mentioned above in point 2.4 may help in this respect, but will not completely solve the problem).

3.2. In spite of the huge amount of LMI, very important pieces of information in Hungary, are still missing.

The most important shortcoming is the lack of detailed medium and long-term forecasts on labour demand (broken down by occupation and/or educational qualifications). The MoL has been working on these forecasts since 1992, but the results are not yet satisfactory because during a transition process it is always extremely difficult to produce reliable medium and long-term forecasts of the economy itself, which will determine the future labour demand.

The other problem is that there is no satisfactory feedback on school leavers entering the labour market. From the unemployment register we have reliable information only on those school-leavers who become registered as unemployed. These data are broken down by educational level, but up till now we do not know their numbers by detailed educational qualifications. There are plans to collect this detailed information when the new school leavers will be registered, and to compare the numbers with the output of the school-system in 1998. Of course this approach will only provide negative information i.e. about failures of the system and only allow to make indirect conclusions and rough estimates on the employment of the school leavers by educational qualifications.

In the long run, the solution to this problem will be an employment register, which will be used by the social insurance system and the Public Employment Service.

4. Concluding remarks

On the basis of existing sources of labour market data, analyses, short term projections and longer term forecasts an overwhelming amount of LMI - that also contains important information to VET decision making - is being produced in Hungary. In spite of this, some very important information is still missing.

Of course we are proud of the achievement, but we are aware of the shortcomings, so we know that the development must be continued and that we have to work not only on the further development but also on helping the users to having a better access to the existing information, to a better understanding of the findings, so as to make better use of the information

Labour market needs in adult training programmes in Hungary

(Eva Fodor)

In the constantly changing world at the end of the 20th century, our country is undergoing a fundamental socio-economic transformation. In economic terms some of the most important characteristics of these fundamental processes are: privatisation, innovations, structural changes, integration into world economy, etc. To become a market economy, the Hungarian economy needs a deep structural transformation. A crucial element of this process concerns human resources and their development.

Significant changes in the economy are always reflected in the state of the labour force, which is, in fact, playing a determining role in the change itself. This is exactly the situation now, when the economy has to enter into a totally new stage of development.

Data show that in the 90's about 250,000 people participate in some kind of adult training each year. This figure includes 70-80,000 students participating in evening courses organised by the high schools of the so-called traditional system. Another major group are the 100-120,000 postgraduates of the universities and colleges. Chart 1 shows the numbers of people participating in labour market training.

Labour market training proved to be the most important form of training between 1992 and 1996, even if the increase of participants slowed down. A major reason was that the number of the unemployed dropped. But there were numerous other contributing factors , the analysis of which is not part of my presentation.

In 1996, the number of people participating in labour market training was approximately 57,000.

The above-mentioned data underline the fact that training can be one of the most efficient means for transforming our economy. Hungarian employment policy clearly considers training a priority among the pro-active tools for change.

There are, naturally, opinions declaring that training should first of all be used to reduce functional and structural unemployment. However, I believe in a post-communist economy in the state of radical changes like the Hungarian one, where traditional branches of industry cease to exist or get quite another perspective, where privatisation is in progress, and services and information technology become prominent, training has a larger role to play.

The labour force structure is out of date. When looking at the educational background of the unemployed we see that more than 50% of them are unqualified. These people become "long-time unemployed" and their number is growing. In a situation like this the transformation of our economy cannot be achieved without adult training.

In Hungary the co-ordinator of vocational training is the Ministry of Labour. The Ministry has already taken the most important steps for regulating the vocational training system:

- it established the National Core Curriculum;
- it defined the National Register of State-acknowledged Trained Professions;
- it prompted Parliament to pass modifications to the Public Education Act, the Vocational Training Act, and the Act of Higher Level Education.

The Chambers have been given a significant role and responsibilities for vocational training. For example, the control of vocational training has been delegated to the Chambers of Commerce.

For modernisation it is important to develop an institutional system closely linked to the market economy. This system should respond to the demands and opportunities of the economy.

It is well known that the vocational training in the educational school system cannot follow the fast changing requirements of the labour market because of the rather long duration of its education. So it was necessary to create complementary, more flexible forms of education outside the system.

In the last 6 - 7 years a three-pole system of institutions has been set up for labour market training in Hungary:

1. The network of schools traditionally performing adult training;
2. Enterprises and non-profit organisations performing labour market training (a dynamically growing set);
3. The national network of Regional Training Centres.

Even these days the traditional school system plays a considerable role in vocational training. This active participation in adult training is a highly positive factor from the point of view of labour market adaptation, especially for young people.

The majority of short-term courses are carried out by a multitude of enterprises (60,000 trainees a year). Their exact number can only be estimated since there are thousands of companies whose business purpose includes training activities but who rarely really perform them. Among them are about 800 organisations that function all year round.

These companies are not merely "me-too" competitors on the training market but they often are the only ones to train for certain jobs (examples are chartered accountants, hostesses, models and foreign languages). Their level of training is uneven. First of all they purported to provide "intellectual capital" of high quality. Now one can see that a certain group of entrepreneurs offering high quality training is emerging among them.

The network of Regional Training Centres involves the companies. It aims at satisfying their needs, at participating in the updating programmes of the given region, and at creating the conditions for the functioning of new technologies by training the labour force. Its link to labour market training is, consequently, a double one:

- it is highly responsive to the demand of employers, while
- it also focuses on the abilities and knowledge of the individuals.

The training has two starting points. One is the trainee, who wants to be trained. Our aim is to provide him or her with the most adequate course and enable him / her to finish it. Our modular training system makes it possible to join and quit the courses at different moments, so trainees can master a given skill at any level. The system provides an opportunity for further or re-training. This also means a better perspective, mobility and growing sense of security for the trainees (Module map).

The other basic fact is the training need. The course materials have been developed in co-operation with representatives from the different trades. The training itself is mostly the practical acquisition of the necessary knowledge and skills needed for the job. In order to be able to react to the fast changing labour market our institution seeks a daily work relationship with the employers and trade unions of the region.

The training spectrum offers conditions for satisfying a wide range of training needs. This network makes it possible to find an institution in all regions of the country which can offer an adequate course to the unemployed with any kind of educational background that can be carried out in a short time. Besides vocational training, the Training Centres offer a wide range of employment services to the communities. Career counselling, ability tests, psychological tests and upgrading courses are available, if necessary, as well as job search or job keeping techniques and personality and communication development. "How to launch one's own business" modules are added to the professional ones. Flexibility is one of the most prominent characteristics, both in terms of duration and content of the course and the adaptability to the individual needs.

We now have the first results of this new network. Their training capacity is about 10,000 trainees per year. The Regional Training centres have developed approximately 200 vocational training programmes and the network offers 300 additional (shorter) courses to satisfy local needs.

According to estimates, about 20% of the training courses financed from the employment fund are performed by the Training Centres and the extent of this is higher in counties where a Training Centre operates (Chart 1)

Chart 1: NUMBER OF TRAINEES IN LABOUR MARKET TRAINING 1993-1994-1996

	1993	1994	1996
ÖSSZESEN	87 755	90 872	59 634

Fourteen thousand, three hundred people in 1994, twenty one thousand, six hundred people in 1995 and twenty nine thousand, three hundred and forty two people in 1996 started training within the network of the institutions. The changes in the numbers by Training Centre are shown in Chart 2.

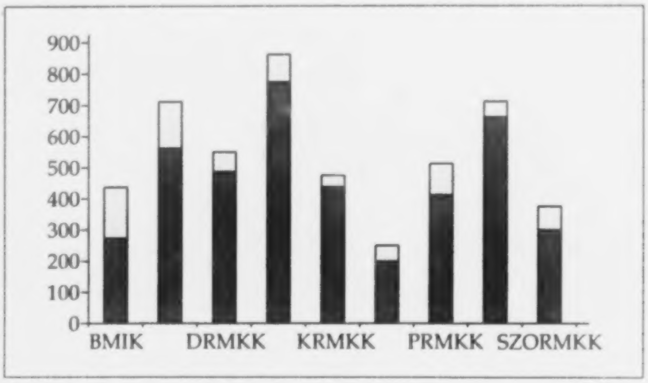
Chart 2: EFFECTS OF ACTIVE MEANS 1996

ACTIVE MEANS	NUMBER OF PARTICIPANTS
Labour market training	59 634
Support of wages	24 071
Public communal work	133 023
Support of investments	3 995
Support of new enterprises	4 617
Support of part time jobs	3 819
Early retirement	5 263
Other means	5 982
TOTAL	**240 404**

Active means total: 4 495 000

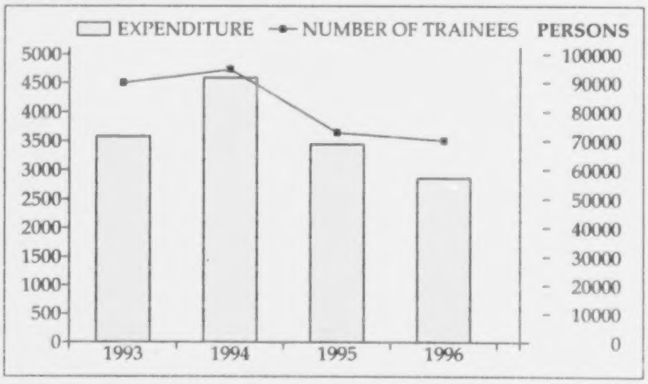
When analysing the internal structure of the client composition of the network of the institutions , it can be seen that while in 1994, 67% of those participating in training were unemployed according to the provisions of the employment law, by 1996 this ratio was reversed: 30% of the trainees were permanently or temporarily out of work (Chart 3).

Chart 3: THE CHAIR CAPACITY OF THE TRAINING CENTRE



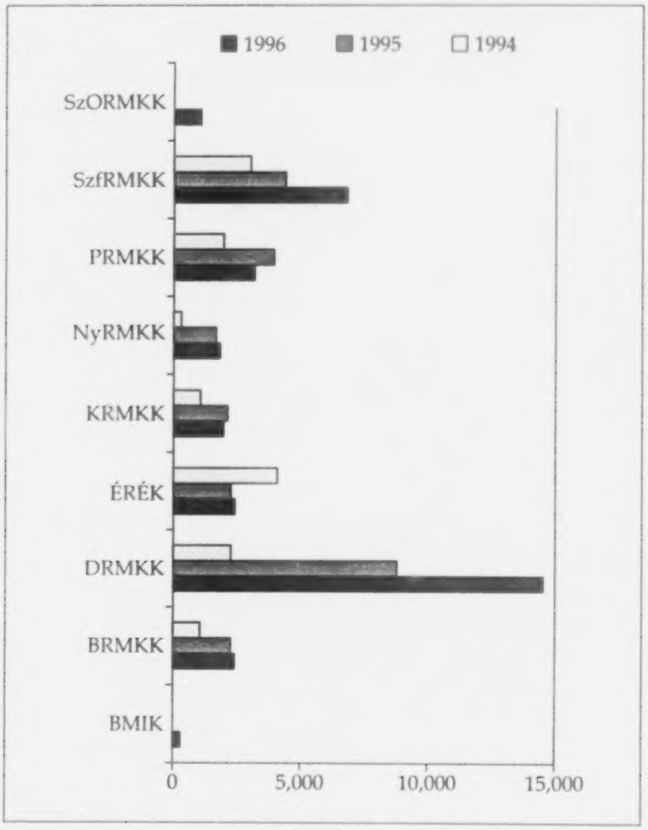
The age composition of those participating in training run by the Training Centres is slightly different from the national average. The main reason for this is that the clients of the Training Centres are not only the unemployed but also, to an increasing degree, the employed (Chart 4).

Chart 4: THE AMOUNTS USED FOR TRAINING FACILITATING EMPLOYMENT AND THE NUMBER OF TRAINEES IN HUNGARY



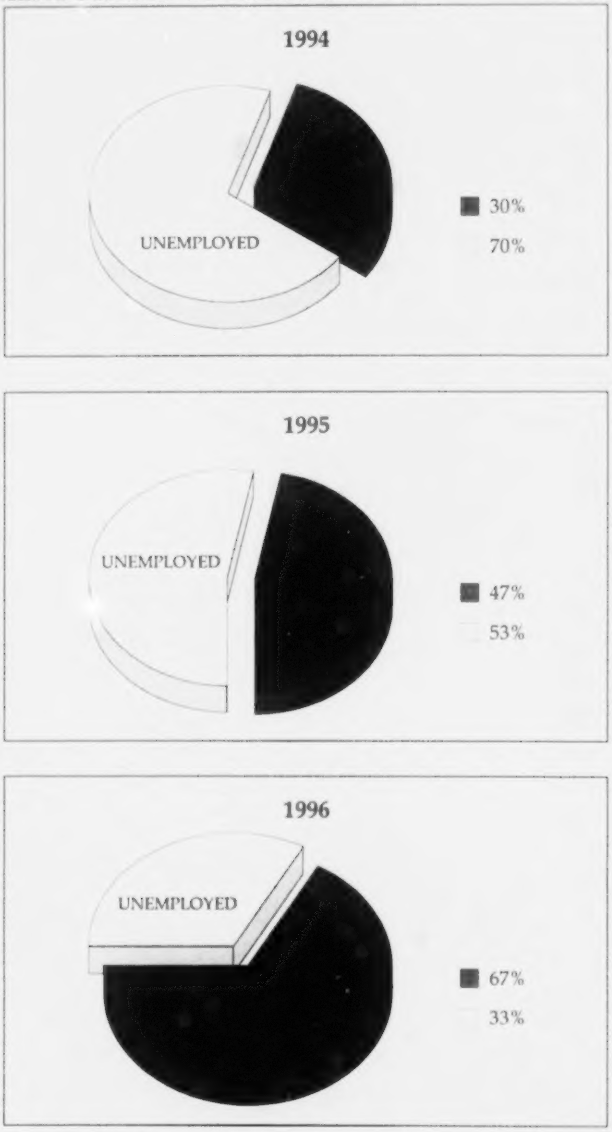
The composition of the trainees by age is in close correlation to their composition by level of education. About 30% of those participating in the training of the Training Centres have only finished primary school. If we add to this the number of those who have a certificate of a skilled worker and whose vocational knowledge has been significantly devalued by the changing economy, the three groups together amount to more than 50% of all trainees (Chart 5).

Chart 5: THE NUMBER OF ENTRANTS IN TRAINING



Over the years most courses belong to the main group no. 4 of the OKJ (National Catalogue of Professions). Within this group, a very high percentage is represented by the different types of computer technology training (Chart 6).

Chart 6: EMPLOYMENT STATUS OF THE TRAINEES



One important question in the Hungarian training market is: what should be the focus of the training and which should be the most important directions of training? Naturally this is a difficult question in the given economic situation of Hungary, when the economy stagnates in some regions or declines in many pockets, but there are only a few regions with this development.

Labour market training has to satisfy a double purpose in the Hungarian system, that of the (economic) demand and that of the individual (client):

1. It should be flexible from the point of view of the everyday needs of the economy and it should open up opportunities.

2. It should prepare the individual for participating in the given course through special services. The participants should not only learn a trade but become active and innovative.

The first is closely linked to the demand for labour force. It is very difficult to determine the specific long-term directions of training but the factual material can be described. Among others we can mention information technology, telecommunications, quality assurance, tourism, finance, banking, computer science, environment protection, entrepreneurial knowledge and other specialisations determined by the various regions. Basic elements are upgrading, communication, personality development and socialisation programmes for the undertrained labour force.

The forecasts of the various research institutes, the short-term regional forecasts and surveys on the job positions can be used for estimating the future demands of the economy.

The everyday needs of a given region or economy can be understood by using:

- scenarios of the regional development,
- information from the County and Local Governments,
- the broad information base of the Chambers,
- demand-supply statistics of the Employment Offices and other information from employers.

These projections, statistical data and prognoses are the basics of our programme options which we offer to unemployed people or Labour Offices.

During the last three years more than 64,000 adults have been taking part in Vocational training courses at different levels in Training Centres. In addition to our basic function - training of unemployed adult people - 50% of our services are nowadays carried out for employers in order to train their employees. More and more SMEs are using the services of the RTCs to satisfy their training needs.

Besides this everyday contact between the Training Centres and the employers, continuous monitoring is of fundamental importance. The absolutely user-oriented programmes are developed in this way.

The first goal - the everyday contact between the vocational training and the employers - allows a quick reaction to the demand of the business world and thus helps the economic development.

In the Training Centres we have a special programme for the employees which we can adopt in a short time to satisfy any company's needs.

Employers are starting to respond well and quickly to the needs of the market and want to have employees who are able to change and face the challenges of the market.

Among these requirements for fast response the most important ones are:

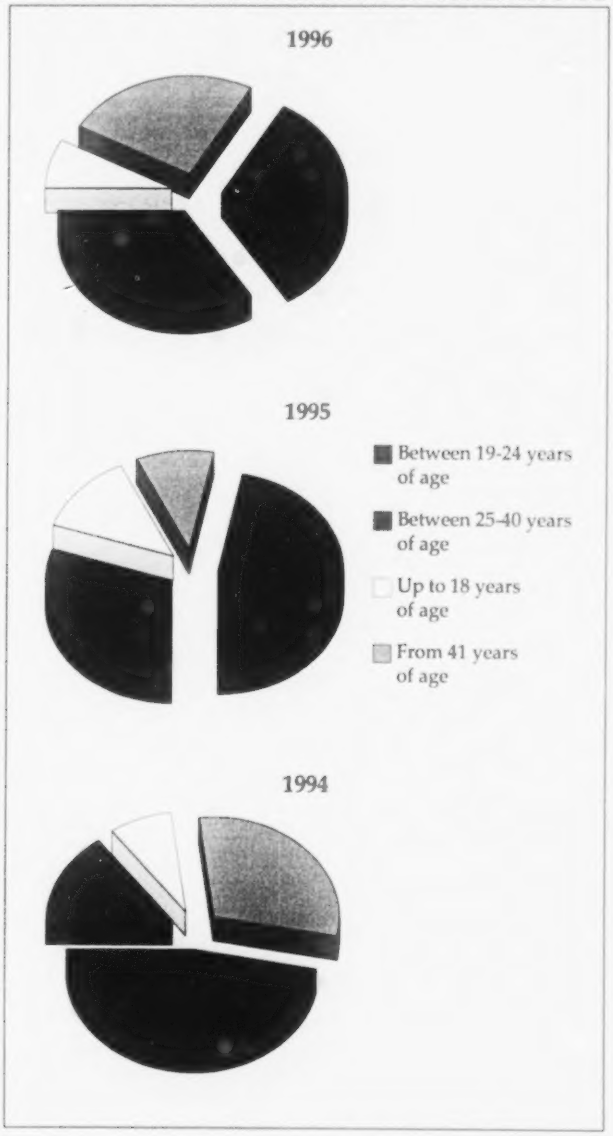
- to keep up-to-date contact with the employment offices,
- to keep up-to-date contact with companies of the region,
- to help to analyse the companies needs and determine the educational and training needs with suitable methods,

- to develop practice-oriented, intensive, competency-based and modular structured programmes,
- to search for internal and external training resources,
- to implement training programmes,
- to study training efficiency.

We are developing training projects in close contact with the highly qualified company specialists in the pertinent jobs and human development management.

Chart 7 shows content and structure of our user-oriented programmes.

Chart 7: THE COMPOSITION OF PARTICIPANTS OF TRAINING BY AGE



I. Preparatory Stage

- formulating the contact with the company;
- analysing the structure of production profile and production, the compare with the demand for new products in order to decide on training needs.

II. Development Stage

- analysing job and tasks.
  In this part of the programme we concentrate on the most important tasks, competitiveness of a given part of the job in order to determine the exact points of importance and the competencies of the job;
- planning the education;
- developing the curriculum;
- choosing the trainers who have special technical knowledge and experience in the given job and in adult training;
- training the trainers:
  a) understanding and using job and task analyses,
  b) developing the order of the training programme and the days,
  c) teaching them how to use the different technical means of education and the different methods of adult training.

III. Execution Stage

- Choosing the participants.
  One of the most important parts of the training stage for the result of the programme depends first of all on the abilities and the motivation of the future employees.
  In cases of unemployed people we make selections with the help of the labour offices. Among the employed we ask for the help of human relations management. The selection is based on special tests and personal consulting with the candidates.
- implementing and organising the training;
- evaluating the results of training programmes on two levels:
  - course level (knowledge and abilities of the student),
  - programme level (cost, efficiency and so on).

The centre of the projects is the user, i.e. we want demand-oriented programmes with quick start-up. That is the proof of the efficiency of the programmes.

I hope, I have succeeded in convincing the reader that a high standard and demand-oriented adult training organisation is definitely taking shape in the Hungarian labour market training.

Since it has to be built up with hardly any tradition, the VET system also has its problems.

- A full information system suitable for deeper professional analysis has not yet been developed.
- There is no uniform practice for the selection and support of the trainees in the non-governmental sector. Often training programmes for those in the worst labour market position or those badly needing them for finding employment are not available.
- The practice of choosing training institutions and programmes differs from county to county.
- Similar training programmes have quite different costs.
- Priority is given to supporting those already unemployed.
- The transformation of the vocational training for the young happens too slowly.
- The training offer is cyclical.
- There is no uniform system for the qualification of the trainers.

In spite of the above-mentioned problems the Hungarian adult training system, has been successful both under quantitative and qualitative aspects.

Today, even the law makes labour market training part of vocational training.

The rate of course graduates finding a job is one of the most important indicators of the efficiency of labour market training. On the basis of a full circle follow-up this rate was 55% on average in the case of the Training Centres. This figure in itself is good but looks even better if we consider the low labour demand in the Hungarian economy.

One of the most important results of labour market training is that more and more companies can give an adequate and quick response to the challenges of the market by training and retraining through our programmes.

Moreover, the so-called gross social efficiency of training must not be neglected. This is difficult to measure, but very important in the long run. Training, even if it does not result in immediate employment at the given time, improves the ability of the individuals for socialisation, their knowledge and keeps alive their chances on the labour market.

As for the principle tasks for the future, they derive from the problems I listed before. The most important ones are as follows:

1. We need an adequate information system in all parts of labour market training;
2. A system for qualifying trainers has to be established;
3. The importance of human resource management should get more emphasis. As a consequence for adult training the employers should participate more actively and intensively regarding both financing and helping to work out curricula.

Regional employment and training observatory in France

(Christine Guegnard and Frederic Perrier-Cornet)

As unemployment persists and the relationship between training and employment becomes increasingly more complex, knowledge of the labour market becomes essential, and the regional employment and training Observatories (the Oref) have to play a part for providing more insight. As regards institutional organisation, the Observatories were created at the end of the eighties, a period characterised by decentralisation[2]. This movement has led to the gradual transfer of major responsibilities for training and employment to regional authorities and is accompanied by a necessity make them coherent with and complementary to the State services.

In order to support this decentralisation, tools of analysis and diagnosis have to be developed at regional level, so the idea is to create an inter-institutional Observatory, sharing the resources of the different State institutions and the regional Council. As regards technology, new needs of information arise. To avoid carrying out additional or redundant surveys, the observatories work with the available data scattered throughout the various institutions, and encourage the regional departments to work together.

The regional employment and training Observatories in France: a heterogeneous situation

Within the context of the contractual arrangements between the State and the Regions, today every region has a regional employment and training Observatory (Oref) , as a "decision making tool permitting to link analysis and forecast for vocational training and initial and continued vocational training" (Mandate of the Prime Minister, February 1988). Therefore, the purpose is to support decentralisation by providing diagnosis and forecast tools to be shared with every regional partner.

The French regional Observatories can be organised in various ways which fall between two extremes: a special department of studies at one end and a network of institutions present in the region at the other. In reality two types predominate: an independent structure with a permanent staff, and a network organisation of experts. An orientation committee and an expert group are found just about everywhere (because of two circulars in 1988 and 1995). However the way in which the Observatory function varies. As a department of studies it may work on the requests from its institutional partners. Or it may create a common base of knowledge which is shared by all the institutions concerned[3].

Milestones

Prior to 1982	Strong national centralisation
1982	creation of a regional power and restricted transfer of authority
1988	circular of the Prime Minister, government act of the Ministry of Labour
1989	official creation of the Oref of Burgundy
1993	new transfer of increased training responsibilities to the regions: "It reinforced regional powers by giving the regions the responsibility for training actions for young people without any skills and without a job outside of the school system"

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[2] Decentralisation means to transfer decision-making powers, to share the power between the State and the local authorities.

[3] (Source: "The Regional Employment and Training Observatories", June 1995, the National Committee for Regional Programme Co-ordination)

- *The school system:* is run by the State and local authorities for school-based training. The State retains control over the management of the public service of teaching, curriculum and diploma, while local authorities are given the responsibility for the construction, maintenance and physical operation of the facilities.
- *Apprenticeship:* the regions are entirely free to evaluate the needs and organise the means to meet them. Nevertheless, the State remains in charge of defining the content of the courses taken by the apprentices and carries out classroom inspection.
- *Continued vocational training*: each region sets up a regional training programme and finances it on a yearly basis. The State retains the prerogative for the legislative and regulatory framework.

(Source Training and Employment no. 20, Cereq, Summer 1995)

The regional employment and training Observatory in Burgundy: an inter-institutional network

Established within the context of the State-Region contract plan in 1989-1993, the regional employment and training Observatory of Burgundy aims to organise the available information concerning training and employment, in such a way as to build decision-making tools for policy-making bodies. Before the official creation of the Observatory in September 1989, work in Burgundy started from the following findings: the reality of the relationship between training and employment is a complex phenomenon, so no single institution can master this problem alone whether through analysis or action. Thus, it is absolutely necessary to create an inter-institutional working group in order to build the necessary conditions of shared understanding or even concerted action.

Leaning on public statistic systems, the Observatory tries hard to create a basis of common knowledge in order to facilitate the coherence of actions from different training actors. Its activities are structured round four following topics: the initial and continued vocational training offer, the local approach toward the job/training relationship, the integration of the trainees and the evolution of the qualifications. The aim is co-operation between all the institutions and study departments present in the region:

- the Regional Council,
- the Regional Board of Labour, Employment and Training (the DRTEFP),
- the Adults Vocational Training Association (the AFPA),
- the National Employment Agency (the ANPE),
- the Associated Regional Centreof the Centre for Research on Education, Training and Employment (the Cereq),
- the Institute of Research on the Economics of Education (the Iredu),
- the National Institute of Statistics and Economics Studies (the Insee),
- the Regional Educational board of Agriculture (the DRAF),
- the Rectorat (a service of the State Education system).

The Observatory, a development tool for labour market information for facilitating VET decisions.

For several years, most studies underline that the relationship between training and employment is complex and that the manpower demand approach is obsolete. This approach tries to match the companies' needs in terms of recruitment by qualification with the number of young people expected to leave the educational system and their level of education. Instead of attempting to find such a fixed mechanical and quantitative relation between needs and training, flexible ways must be found to adjust the supply to the demand side.

In France the experience with an old and all embracing national statistic system has rapidly focused on important borderlines concerning the nature of the observations and the methods used. The Observatories have been created in order to answer a need for information on a sub-national and often sub regional level.

From a planned system of the job/training relationship...

Originally, the national planners attempted to forecast the jobs and the recruitment by profession, and the flows through the educational system by level of education in order to extrapolate the medium term needs. Because the gaps between the forecasts and the actual figures became increasingly larger, the hope to plan the job/ training relationship was given up at the end of the seventies.

There are many reasons why this mathematical attempt to match training and employment could not work: the trainees coming from the educational system are not the only ones looking for a job. The firms' recruitment policy is to take into account individual strategies of mobility whereas planning assumes that the individuals will stay forever in the specific job they have been trained for. Beyond the technical problems of forecast, this approach breaks down because of the uncertainty of future economic, social, technological and organisational developments. If this link between training and employment is "unobtainable" (L. Tanguy, 1986), it is above all because the relationship between the two must be understood in a different way.

The same training courses can lead to various types of jobs, and work places can be occupied by people trained in different ways. In addition, the firms' needs fluctuate and the individual demand for education and work (for young people or adults) also develops according to fashion, social reputation, economic necessities and so on. The lack of a rigid and simplistic link between training and employment does not mean that the education does not structure the access to a job. The economic crisis has reinforced the selective aspect of diploma concerning the access to a job and has maintained the strong link between the hierarchy of diplomas and the hierarchy of jobs.

The firms' needs can not be forecast in a deterministic way, and training is not the only answer to the problems of entering or keeping a job. No doubt, the companies, confronted with technological and organisational evolution and also uncertain about their future qualification needs, increasingly prefer to hire more qualified people but not always for more qualified jobs. The educational system cannot define objectives based only on the needs expressed by the firms.

The educational and vocational system has to give future workers the tools to be able to adapt throughout their professional lives with all its future evolution. Better training does not only aim at solving the problem of unemployment. The labour market is competitive, any increase in individual qualifications allows it to improve its relative position but cannot, by itself, solve the problem of under-employment.

A perfect job/training match is an illusion. The gap is too large between the time a firm sees the need for staff with a certain qualification and the moment the first holders of a diploma leave a training course So either the need has been met (hiring of neighbouring qualifications, internal promotion) or has disappeared under the effect of new economic transformations or redundancies. The idea is to give everybody a qualification and to adapt the educational level of wage-earners to a technical, more exacting environment in rapid mutation.

... to seeking flexible adjustment

The request that the end product of training courses should correspond exactly to firms' qualification needs therefore presents real difficulties: beyond the short-term the firms' needs are difficult to measure , and at any rate remain highly changeable. Most training courses are not specific to one trade or sector, and in a context of profound restructuring, they succeed less and less in preparing people to one specific job. This link cannot be found or has not yet been discovered. However certain methodological advances and the experience out of exchange with the social partners allow to limit the margin of error.

**** by getting together the different pieces of the puzzle***

In France a wealth of data is available, as for many of them reporting to the authorities is mandatory. But these data only give a partial view of the reality. The first aim of the observatory is to analyse the labour market. This job is achieved by connecting these different pieces of the puzzle in order to highlight how they interact. These sources of employment and training data are not necessarily coherent and inappropriately express the reality that we have to study. Thus the observatory has to gather data and to carry out analyses which will keep the deciding bodies updated. It is more a matter of better using the existing data and increasing synergy than creating new structures of observation and requesting new information or surveys.

The main sources used by the Oref of Burgundy

Each source of data is characterised by a field and a periodicity which sometimes restrict its use. The population censuses (Insee) gives an exhaustive picture of the total population (training, employment, unemployment...) at a specific date, every seven or eight years. The Department of the Rectorat every year registers all the pupils and students. The turnover of the wage-earners in the private businesses with more than 50 employees is counted monthly in an exhaustive procedure (DRTEFP). In Burgundy an additional quarterly survey allows to study staff turnover in private firms with 10 to 49 wage-earners. Every month ANPE provides the characteristics of the job seekers. And to find out the professional integration of the young trainees, the schools and the apprenticeship centres carry out a decentralised survey each year on February 1st (Cereq/Rectorat).

quickly improve the accuracy of the surveys, often out of date and of administrative origin As the selection of initial vocational training and the composition of continued training is not part of national planning, the Observatory must particularly facilitate a policy for their successive adjustments. This implies supplying data for a sub-regional analysis of the territory.

In order to produce these data, it immediately proved necessary to:

- obtain the detailed and regionalised results of the vast national surveys (census, employment survey, integration survey, etc.);
- in order to know the types of job in the firms, the development of their structure and the flows (hiring and firing) of their workforce;
- find out the precise profile of the job seekers (age, sex, qualification, diploma, professional experience, etc.) and the extremely varied paths that young people take after leaving the educational system (or the adults leaving public systems) to find a job or some other activity.

** by multiplying the approaches*

In order to better define the functioning of the labour market and to improve our understanding of the complexity of problems concerning the job-training relationship, we have to adopt various approaches. So, an analysis process of the employment and unemployment problems must be based on sectoral as well as, local observations and be refined to give a break-down according to qualifications, the types of job occupied and searched. Thus the Observatory of Burgundy developed:

- an approach by activity sector or by trade to point out the specific workforce management for each activity (what qualitative and quantitative development for which jobs ?),
- a territorial approach allowing to differentiate the socio-economic development of the territories on a sub-regional level: what are the basic components in the area ? How does this territory compare with the region ? What are the main weaknesses to be corrected?
- an analysis of the initial vocational training offer to compare it to the social demand: does the available offer in one part of the territory fit the production system? Does it allow young people to choose various fields of training and at various levels of qualification? Does the existing training guarantee a good preparation for entering a job?

** by ensuring cross analyses*

The economic information concerning the structure and the development of public and private sector companies (according to their size and the nature of their production), concerning the different job types, the data of job seekers (sex, age, length of service, evolution, etc.), can be compared to demographic information, as can the flow of school people by level or field of vocational training. These more or less permanent instrūments of analysis and diagnosis are prerequisites for most of the decision-making bodies and the local actors. How indeed can one suggest paths towards integration or ensure guidance without a previous analysis on the openings in terms of job, mobility, qualification, or the activity sector?

Whatever their sector of activity and their site, firms continuously hire and fire staff. The observation of this turnover, which varies from company to company, allows to define the characteristics external recruitment by age, sex, qualification, type of jobs offered, contracts of employment, etc. The observation of the firms' real practices constitutes a pragmatic tool, all the more usual in the relationship with social partners. Experience shows that professional organisations are concerned with the promotion of their members, and have a relatively restricted knowledge of their collective practices. In general, they seem very keen to receive information about their collective behaviour.

The training needs appear to be extremely diversified and are not affected by the same developments. They depend on whether the activity is industrial, commercial or agricultural and whether they are in a highly or not very competitive market, open to international trade or not. Beyond a general analysis of the structure and the past developments of these sectors, it is interesting to highlight the principle current characteristics of workers (type of job, qualification, turnover, site, etc.).

Why an approach by activity sector? Certain jobs, and also the training linked to them, are totally subject to the changes of sectors in which they are predominant. For example: there are many mechanics in car manufacturing and car-repair, their future depends therefore mainly on the development of these sectors. It is advisable to measure the dependency of each type of job with regard to one or several economic activities. This first phase gives quantitative indications about the main trends in a certain trade.

This approach by sector can be enhanced by a more qualitative analysis concerning job qualification. The same trade is practised differently and activates different skills in a secondary or tertiary sector company, or in a small shop or a big production unit. These cross observations allow to estimate a global need and to more clearly define the characteristics of the vocational training which must be implemented. Of course, all this analysis only means something as long as its conclusions can be compared with the educational offer existing at a given moment. The differences found between the existing and the desirable (or necessary) will highlight many elements which help a training system to adjust to market needs.

In order to establish the characteristics, the specific features for each area, rural or urban, the Observatory also takes into account the highly characteristic disparities in the regional territory concerning several aspects: demography, training, employment or jobs, unemployment and integration. Is it an attractive area which keeps young trainees, or are there many job seekers? Are young people being recruited as unskilled workers? The conclusion of each local analysis suggests ideas for or comments on training courses, precisely in order to allow an improvement in the dialogue between the various local actors and decision-making bodies which work in the fields of training and employment.

**** Using analysis to stimulate the actors' thinking***

Furthermore, the forward planning for training programme of the regional development plan enable the economic actors and the decision-makers in the fields of training and employment (State, local education authority, industrial sectors) to compare the actual with the desirable. So they are stimulated to get together and talk about the modifications which should be brought to bear on the vocational training offer. The Observatory's answer consisted in providing all the partners with information on the issues, which can be debated, It accounts for the principle conditions and developments in each sector, the jobs in each sector, the hiring practices of the firms, the professional integration of young people after training connected with these jobs... So the Observatory suggests a more cross-disciplinary approach linking the trades (in the sector concerned or other), the activity sector, the training and the integration. The regional Council's expects the Observatory mainly to help in the reflection and to provide methodological support.

The specific constraints of a network organisation

Briefly, the double mission of the Observatory consists of:

- describing the functioning of the regional territory in detail (by area of employment for example), underlining the tight links between the economic development (enterprises, jobs...), the demography, the unemployment, the malfunctioning of the labour market, the structure and the developments of the educational system, the conditions for professional integration of different people (young, women, low levels of qualification).
- providing public actors (State services, Rectorat, Regional Council) or the private ones (firms, professional branches) with organised information allowing to assess the stakes concerning the development of jobs and the professional qualifications they require.

Because we are not a studies department but only a network of experts, the Observatory of Burgundy is commissioned to build tools for understanding which will be used in each of the associated institutions. Experience shows that the main contributions of our group is of a pedagogical nature: the presence of the experts ensures an ability to explain the provided information and analyses used in the region.

Secondly the Observatory prepares a common ground on which the actors in training and employment, i.e. the State, the local communities, enterprises and individuals define their room to manoeuvre. That limits the negative effects of the increased number of decision makers each with his own language and his own strategy and they can share their ideas with their "partners" in a more or less coherent and co-ordinated way. The successive steps of analysis must create a common basis of understanding and negotiation for the main actors in the job-training relationship.

In general, the regional practice underlines the importance of the time factor. To convince sometimes competitive institutions to share certain view points and to come to concerted action takes a long time. The experts must prove, that they provide reliable information and progressively build a lasting relationship of confidence with the decision-making institutions. Also as regards questions of methodology the time for ideas of the experts to result in decisions of the public actors is rather long, sometimes two to three years.

We close with an example for how our work is used in continued vocational training and how long lead times can be. At the request of the previous Regional Council, the experts of the Observatory carried out a job/training diagnosis in Burgundy, published in September 1993. This diagnosis had never been used until recently, because of the political change in regional management. Now, the region is using the analyses and the main conclusions of this work to set up a regional training programme.

New methods for linking vocational education and training with the labour market in Poland: the results of a pilot application (Mieczyslaw Kabaj)

Introduction

During recent years many special programmes for counteracting unemployment have been developed and implemented. Due to a new policy for the promotion of employment the general level of unemployment has been reduced from 3 million people in 1993 to 2 million in 1997 i.e. by 33%[4].

In spite of these special programmes for increasing youth employment and reducing the general level of unemployment, the youth unemployment rate has constantly remained twice as high as the average. Until recently one of the main reasons was the lack of a proper co-ordination between VET and the changing labour market demand for skills and qualifications.

New methods

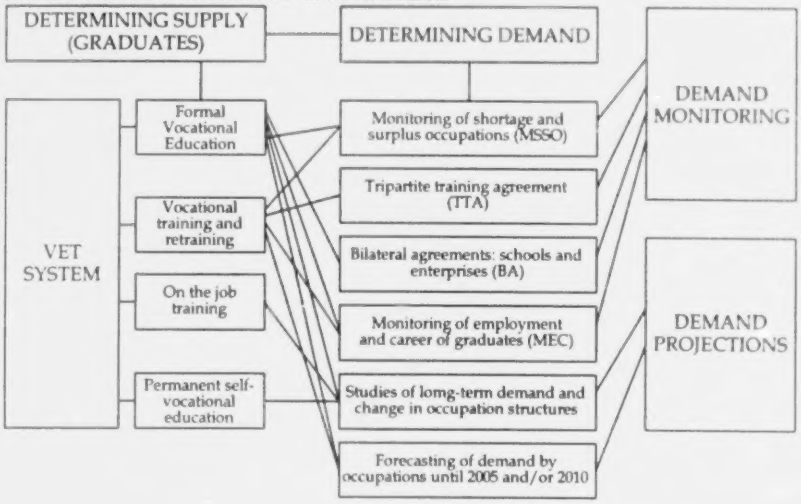
In Poland two new methods for linking vocational education and training (VET) have been developed and implemented in selected regions:

1. monitoring of shortage and surplus occupations (MSSO), and
2. tripartite training agreements.

These methods are used for short and medium-term co-ordination and constitute an element of a broader system for linking VET to the labour market. The basic components of the system are shown in fig. 1.

Besides MSSO and TTA, the system includes bilateral agreements between schools and enterprises (BA), monitoring of employment and the careers of graduates fro the schools and training centres (FMC) and forecasting of long-term occupation demand.

Fig. 1: ***PROPOSED SYSTEM OF LINKING LABOUR MARKET AND VOCATIONAL TRAINING IN POLAND***


DETERMINING SUPPLY (GRADUATES)
DETERMINING DEMAND
VET SYSTEM
Formal Vocational Education
Vocational training and retraining
On the job training
Permanent self-vocational education
Monitoring of shortage and surplus occupations (MSSO)
Tripartite training agreement (TTA)
Bilateral agreements: schools and enterprises (BA)
Monitoring of employment and career of graduates (MEC)
Studies of lomg-term demand and change in occupation structures
Forecasting of demand by occupations until 2005 and/or 2010
DEMAND MONITORING
DEMAND PROJECTIONS

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[4] For further details see M. Kabaj, Programmes and Strategies for Counteracting Unemployment and the Promotion of Productive Employment in Poland, ILOCEET, Geneva/Budapest 1996, pp. 52

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Monitoring shortage and surplus Occupations (MSSO)

The main aim of MSSO is to identify the occupations which are in shortage or in surplus on the local and/or regional markets. This information is vital for vocational schools. training organisations and publicly financed labour market training (Labour Fund).

Among the nine sources of information (see fig. 2), two are the most important :

1. monitoring job-seekers and job offers by the Public Employment Service (PES) and collecting information on the careers of graduates by the VET schools and again the PES.
2. annual surveys on expected job creation and destruction in local/regional enterprises by PES in co-operation with the enterprises.

Thus the monitoring of shortage and surplus occupation by PES is based on three variables per occupation :

- job-seekers,
- job offers,
- graduates entering the labour markets.

The survey in the enterprises also covers three variables per occupation :

- expected hiring,
- expected lay-offs,
- hiring of VET graduates.

Tab. 1 shows the information collecting method used in Poland (1996)

Tab. 1: THE THREE BASIC VARIABLES USED IN (MSSO)

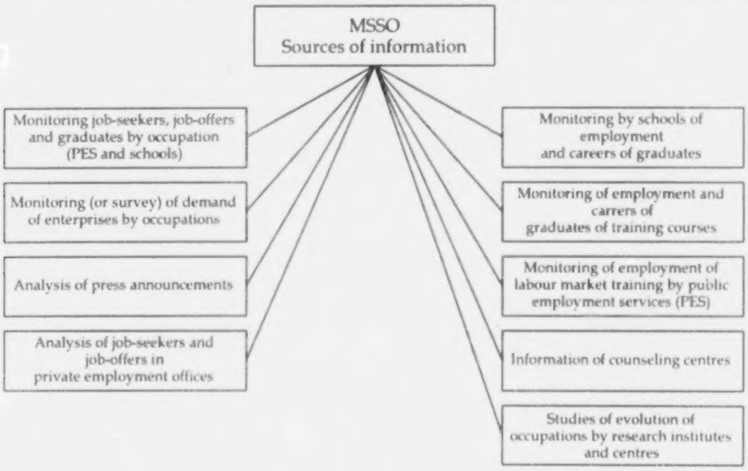
A. PES INFORMATION

NSOC code	Occupation	Job-seekers PES (a)	Job offers PES (b)	Shortage/S urplus (a - b)	Graduates entering the labour market
....	1.				
....	2.				
....	3.				
....	4.				

B. ENTERPRISE INFORMATION

NSOC code	Occupation	Expected hiring (a)	Expected lay-offs (b)	Shortage/S urplus (a - b)	Graduates entering the labour market
....	1.				
....	2.				
....	3.				
....	4.				

Fig. 2: ***MONITORING OF SHORTAGE AND SURPLUS OCCUPATIONS (MSSO)***


MSSO
Sources of information
Monitoring job-seekers, job-offers and graduates by occupation (PES and schools)
Monitoring (or survey) of demand of enterprises by occupations
Analysis of press announcements
Analysis of job-seekers and job-offers in private employment offices
Monitoring by schools of employment and careers of graduates
Monitoring of employment and carrers of graduates of training courses
Monitoring of employment of labour market training by public employment services (PES)
Information of counseling centres
Studies of evolution of occupations by research institutes and centres

This monitoring of shortage and surplus occupation has been introduced on a pilot basis in four local and two regional labour markets. The results shown in Tab. 2 were rather surprising. In shortage occupations there were 3,067 job offers (according to the PES system) and only 146 graduates entering the labour market, i.e. 5 graduates per 100 job offers. Adding the registered unemployed we have a total of 17 job-seekers per 100 offers.

On the other hand in surplus occupations there were 193 graduates per 100 job offers and a total of 594 job-seekers per 100 job offers (see Tab. 2 and Fig. 3).

The analysis allows two conclusions : firstly, the vocational schools are not 'producing' enough graduates for shortage occupations and instead creating too many in surplus occupations. Under the condition of high unemployment there is still a shortage in certain occupations. At the same time, public and private vocational schools produce potentially unemployable graduates. In other words public vocational schools are spending public money in a way which is not in line with public interest.

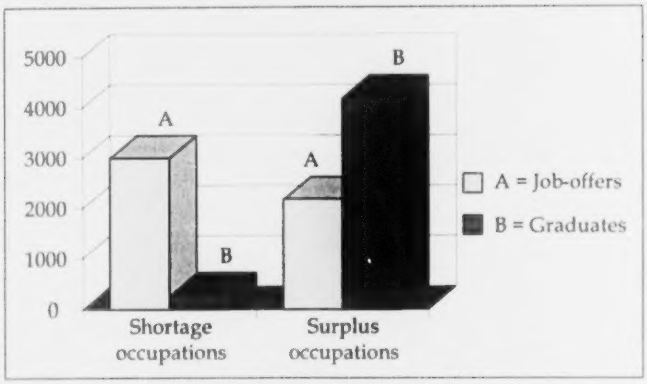
Tab. 2: ***THE RESULTS OF THE 1996 PILOT APPLICATION OF THE OCCUPATION SHORTAGE AND SURPLUS MONITORING SYSTEM IN THREE LOCAL LABOUR MARKETS (GLIWICE, KNUROW AND PYSKOWICE)***

Items	Shortage occupations	Surplus occupations
1. Registered unemployment (PES)	380	8743
2. Job offers (PES)	3067	2175
3. Number of job offers per unemployed	8.1	0.25
4. Graduates from VET schools*	146	4198
5. Number of graduates per job offer	5	193
6. Number of registered unemployed and graduates per job offer	17	594

* *entering the labour market*

Monitoring results

Fig. 3: RESULTS OF MONITORING



We see a gradual change of the VET structure i.e. an increasing number of students in shortage occupations and a reduced number in surplus occupations may contribute to a substantial reduction in youth unemployment.

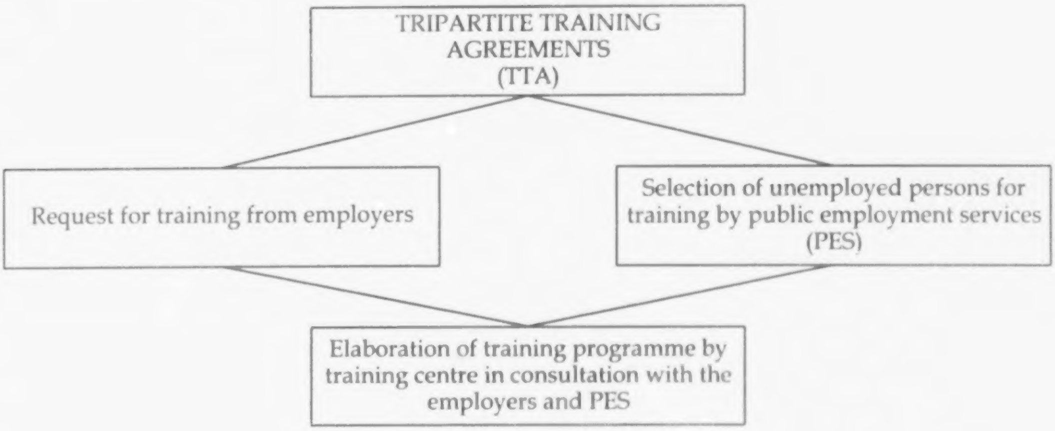
The VET system can gradually adjust to the labour market, if the schools (and other vocational training centres) regularly receive information on shortage and surplus occupations. This requires the introduction of monitoring in local/regional labour markets. It is expected that the Minister of Labour and Social Policy will soon recommend the introducion of MSSO in all PES offices.

Tripartite Training Agreements (TTA)

The second method for linking vocational education and training and the labour market which has been developed in Poland and implemented on a pilot basis are the Tripartite Training Agreements (TTA). They have been mainly used to increase the efficiency of labour market training, which was relatively low in terms of trainees employed per 100 people trained : 36% in 1993 and 60.4% in 1996.

The courses were organised by PES in co-operation with training centres. The most important party for employment, i.e. the potential employers, was almost entirely ignored. This turned out to be the main reason for the low efficiency of labour market training.

Fig. 4:


TRIPARTITE TRAINING AGREEMENTS (TTA)
Request for training from employers
Selection of unemployed persons for training by public employment services (PES)
Elaboration of training programme by training centre in consultation with the employers and PES

As the employer is the decisive partner in the TTA he should determine the training programme (based on the requirements for his vacant jobs) and co-operate in the practical part of it (the on-the-job training)

These tripartite agreements haven been applied in 36 regions (out of the 49 in Poland) on a pilot basis. The results are shown in Tab. 3. The efficiency of training courses for the unemployed reached 84% overall and 93% in 20 out of the 36 regions. It seems that TTA is one of the best methods for linking vocational training to the labour market and may result in improved efficiency and reduced cost (total training cost divided by number of trainees finding employment).

Tab. 3: RESULTS OF EXPERIMENTAL APPLICATION OF TTA IN 36 REGIONS IN 1996

	Number of unemployed trained	Employed after training	Efficiency
without TTA	84,830	48,632	60.4%
with TTA	4,336	3,630	83.7%
Improvement of efficiency			+38%

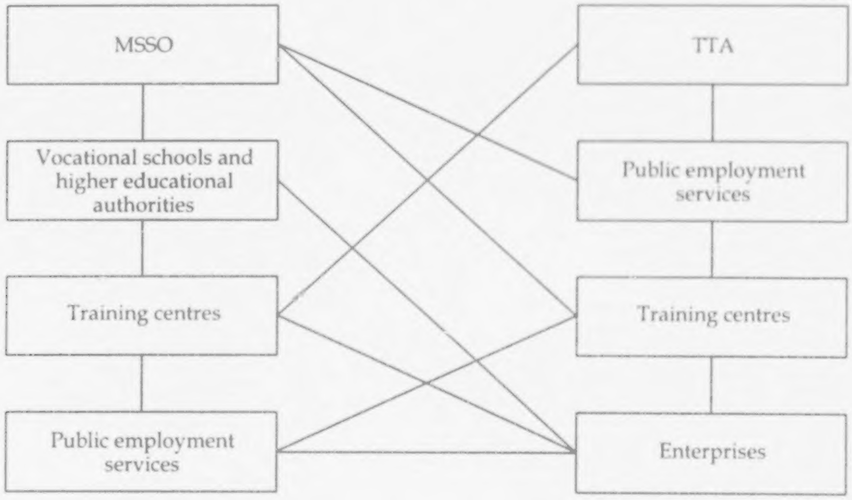
Conclusions

The two methods for linking the VET system with the labour market are interrelated. The PES should implement them simultaneously.

The methods can dramatically improve the external efficiency of initial VET and labour market training.

The methods should be widely used by vocational schools, training centres, education authorities, PES and the labour administration (Fig. 5) for gradually adjusting the VET structure and quality to the changing needs of the labour market and the economy in general.

Fig. 5: *USERS OF MSSO AND TTA*


MSSO
Vocational schools and higher educational authorities
Training centres
Public employment services
TTA
Public employment services
Training centres
Enterprises

The future of skills and work: trends and forecasts in Germany and other countries
(Manfred Tessaring)

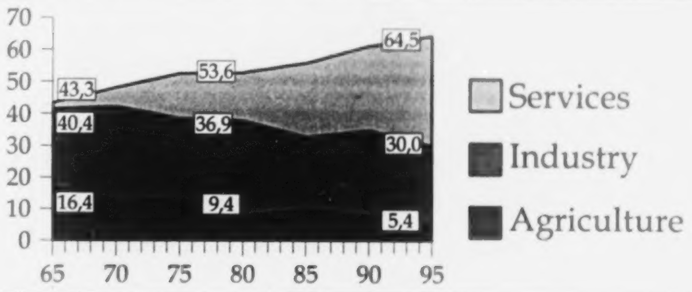
1. On the way to post-industrial and knowledge-based societies

In contrast to the great utopias of work and society in the past and to attempts to find laws and regularities in the change of socio-economic structures and the nature of work, the current process can be described as a dynamism of increasing openness, uncertainty, complexity and acceleration, with all the multiple and interlocked problems faced by advanced industrial societies. These problems refer to enterprises and society as a whole as well as to individuals. It is rarely doubted that these processes go hand in hand with changing structures of the post-industrial society, with the spread of new technologies and new forms of work organisation and labour division both within and between enterprises.

Out of the various theories to explain structural change there are two that apparently have become true in most countries: The Schumpeterian theory of economic cycles, and, based on it, the theory of economic evolution (Nelson/Winter) explicitly stress the role of innovation and of pioneer entrepreneurship as the main forces for the economic success of a country. Moreover, the theories of a post-industrial society (Touraine, Bell, Gershuny) based on Fourastié's theory of the Three Sectors (Fourastié) predict the long-term increase of production and employment in the service sectors.

Their optimism for increasing wealth, humanizing work, prospering education and culture, rising qualifications and abolishing unemployment however, could up to now not be fulfilled on the whole.

Fig. 1: SECTORAL EMPLOYMENT TRENDS IN EUROPE 1965-94 (%)[5]



Comparison (%)	USA			JAPAN		
	1965	1980	1994	1965	1980	1994
Agriculture	6,3	3,6	2,9	23,5	10,4	5,8
Industry	35,5	30,5	24,0	32,4	35,3	34,0
Services	58,2	65,9	73,1	44,1	54,2	59,8

---

[5] 1965/70: EUR 10; 1970-1990: EUR 12; 1994: EUR 15. Civilian employment, annual averages; partly etimated Eurostat; 1994: data for Austria not available - *note* that after 1970 EUR 12 figures for agriculture are higher, and for industry and services lower that trend for EUR 10; EUR 15 figures 1994 change the trend for EUR 12 only marginally - *source:* EUROSTAT "Employment and unemployment", various issues

Undoubtedly, the growing importance of services in the past (figure 1) - in most countries services were the only sectors with employment gains - gives rise to optimistic expectations for the future. But services growth could not prevent the high and persisting level of unemployment and in particular of long-term unemployment, and of marginalisation and instability of employment found in most European countries.

Especially in its 'jobs studies' (OECD 1994, 1995a, 1995b, 1996a, 1996b), the OECD points out that in the past jobs have mainly been lost in the low-technology, labour-intensive part of manufacturing, whereas the main sectors for employment growth have been the services and few technologically sophisticated, science-based manufacturing industries. It is the knowledge-intensive sectors which have been expanding their employment more rapidly than the rest of the economy (Papaconstantinou 1996).

However, the impacts of new technologies on employment, job requirements and skills is a complex set of relationships. OECD results indicate that "there seems to be a direct relationship between 'upskilling' and technical change: industries which invested more in research and were more innovative tend to acquire more human capital. Therefore, policies to promote technology diffusion should be co-ordinated with those that promote the development of adequate human capital." (Papaconstantinou 1997)

The transition from Taylorism to new production and work organisation concepts and to the 'post-industrial society' imposes contradictory elements. They promise a new holistic and self-reliant work, but also - and this is in particular true for the period of transition - this process is accompanied by displacement, under-utilisation of skills and changing types of jobs. Here new job forms must be recognised which show that the "normal" standard employment contracts and occupational careers face an erosion. If these new types of 'flexible' jobs and careers which reflect the complexity and uncertainty of our economies and social environment, are desirable or not, cannot be generalised, however.

Thus, industrial societies are facing a paradox: On the one hand rising skill requirements and the importance of "human capital" as a decisive factor for economic growth and competitiveness, on the other high and persisting unemployment and depreciation of skills ("overeducation", "underutilisation", "skills gaps"). This raises to fears that our societies might run out of work ("jobless growth"). And there is a danger of social exclusion of people who cannot cope with the increasing requirements or do not fulfil the standards of the recruitment process. This problem is at the basis of the question of "employability", i.e. the distinction between those who have - or are supposed to have - the "necessary" qualifications and skills, and those with unfavourable low-skills and other disadvantaged people.

2. Trends and strategies to create employment

The main objectives of current policy and research related to work and skills are the reduction of underemployment, the rise of the qualification level of the workforce and of the competitiveness of firms, and the integration of disadvantaged groups into the labour market.

Concerning the ways and measures to create employment, it is widely agreed today that only a package of strategies can be expected to be successful. It must be pointed out, however, that the creation of additional employment will not necessarily automatically reduce unemployment to the same extent. The success to reduce unemployment depends, among other things, on the number and development of the labour force potential (incl. the 'hidden labour force') and will be limited if there are structural imbalances on the labour market, e.g. due to a mismatch of qualifications, to regional or sectoral disparities etc.

Several strategy papers and scenarios in the past ten years in Europe have proposed ways to create employment and to reduce unemployment. Examples to be mentioned here are early proposals of the "Kreisky Commission" (1987/88), the White Paper on Growth, Competitiveness and Employment by the European Commission (1993), the OECD jobs studies (1994, 1995, 1996) and various strategies proposed by research institutions, e.g. McKinsey Global Institute 1994, Bertelsmann-Foundation 1994 (cf. Huckemann/Suntum 1994), IAB 1996.

The labour force balance for West Germany up to 2005 (Klauder 1995; IAB 1996) calculated by the Institut für Arbeitsmarkt- und Berufsforschung (IAB) shows that without appropriate measures the level of employment will only slightly increase in the period 1996 to 2005. On the other hand, the labour force potential is expected to remain at a high level. Their balancing makes it obvious that the growth in employment will by far not be sufficient to resolve the problems on the labour market:

Econometric simulations 1996[6] of the IAB (1996) quantify measures aiming to halve unemployment in West Germany in the period 1996-2000 and beyond. They come to the conclusion that only a set of strategies and a consensus between all actors in the labour markets may be able to substantially increase employment and also reduce unemployment. An improvement of economic parameters is mainly expected to be most efficient to cause investment growth and employment gains: these are policies concerning working time, wages, taxes, interest rates, social insurance and regulations. Such a consensus, however, could not yet be reached in Germany.

Since policies for employment increase would not automatically reduce (structural) unemployment they must be backed by complementary measures, concerning the integration of the unemployed and the promotion of the first employment of graduates as well as the re-entry of persons into working life.

3. Forecasting employment by sectors, occupations and qualifications

Preventive education and labour market policy depend on some notion about the future, i. e. on possible future developments and structural changes in the employment system, in qualification requirements and the qualification structure of the future manpower supply. The Commission of the European Communities (1996) expressively pleads for forecasts at national, regional, local and company level: "Vocational training should be co-ordinated with the needs of enterprises and individuals. The Commission raises the question of how these needs could be considered, how changes of demand could be identified and how foreseeable changes could be anticipated and on which level."

However, there is also scepticism concerning the reliability and relevance of such forecasts. Although to a certain extent the scepticism concerning the importance of quantitative forecasting for policy-making is legitimate, one has to qualify. The decisive question is how a forecast is constructed and for what purpose it is used. Forecasts may be useful for policies and decision making when, for instance, alternative future lines of development and the effects of certain measures have to be predicted. Forecasts may also function as a warning by outlining in what direction a development would go without timely countermeasures. In this case the forecaster often is even happy if his prediction does not become reality.

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[6] The measures outlined in this paper are steadily adjusted to new developments; the paper of reference here is dated from April 1996 (IAB 1996)

On the other hand, forecasts may be detrimental, particularly when they serve as a decision-making basis for young people's choice of training or occupation. This may lead to counteractive developments: the forecast destroys itself.

It is with this caveat that we present the approaches and findings of some forecasts from recent years for some European countries and in particular for Germany.

3.1. Approaches and procedures

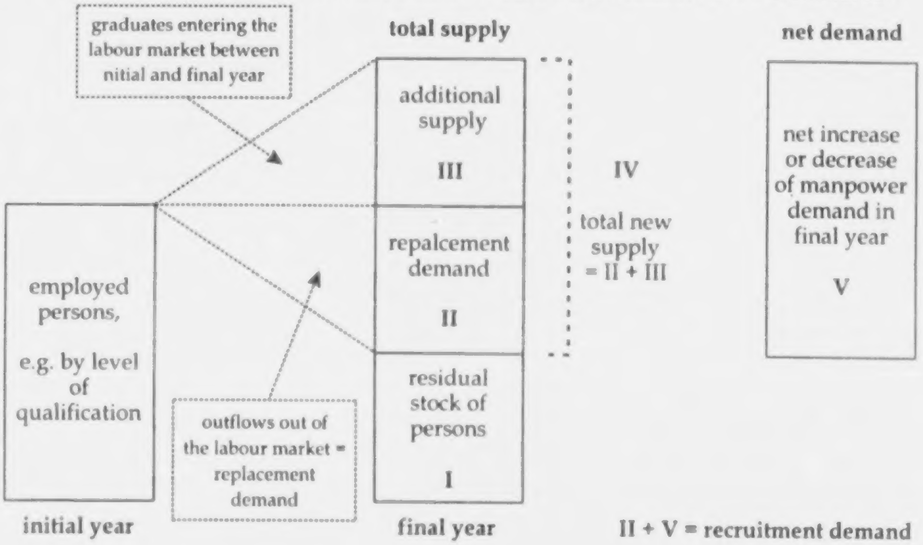
In principle, one should distinguish between forecasts of manpower demand and manpower supply. "Manpower demand" is equivalent to the number of available jobs, and "manpower supply" comprises all those people who work or wish to be employed. The results of both forecasts may be compared as projection balances, which indicate surpluses or shortages (imbalances) in general or in specific labour market segments (e.g. sectors, occupations, qualifications). In most cases, several forecasts variants of demand as well as of supply are made in order to illustrate the range of employment changes to be expected. See de Grip's paper in this publication for a more detailed description of this method.

Supply projections normally use the Social Demand Approach and estimate the future trainee **and student** flows through education and training and their entry into the labour market. By adding up all new entrants during the projection period, one knows the total new supply of persons (by qualification etc.). The sum of the new supply and the residual stock equals the total supply of manpower in the projection year.

Further steps concern the replacement demand which is calculated by using outflows of workers out of employment, (e.g. retirement, death, emigration etc.), differentiated by qualifications, occupations, age, sex etc. It is assumed that the vacant jobs will be filled with persons of similar qualifications. The persons remaining within employment during the whole projection period represent the residual stock.

The recruitment demand denotes the number of jobs available for future graduates and thus indicates their employment prospects; it is equivalent to the sum of replacement demand and net change of total demand. These procedures are illustrated in figure 2.

Fig. 2: *FORECAST OF MANPOWER SUPPLY AND RECRUITMENT DEMAND*


graduates entering the labour market between nitial and final year
total supply
net demand
additional supply
III
IV
net increase or decrease of manpower demand in final year
V
total new supply = II + III
repalcement demand
II
employed persons,
e.g. by level of qualification
residual stock of persons
I
outflows out of the labour market = replacement demand
initial year
final year
II + V = recruitment demand

3.2. Structural manpower forecasting in Germany

Medium and long-term employment forecasts in Germany are carried out by a number of institutions. They refer to a general outlook of employment change and the measures to reduce unemployment as well as to structural forecasts of the future labour force demand and supply by occupations, work activities and qualifications[7]. Projections of the structure of manpower demand and supply in Germany have been carried out jointly by Prognos/IAB (1989), by IAB (Tessaring 1991 and 1994), by Weisshuhn et al. (1994) and by BLK[8] (1994).

3.2.1. Projections of Prognos[9] and IAB[10]

Procedure

The IAB/Prognos projections forecast the manpower demand by sectors, job activities and levels of qualification until the year 2010. The projection was carried out in three steps:

- The *first step* contains the projection by economic sectors (Prognos 1989). The projection takes into account several scenarios of the population and final demand, of global economic developments, technologies and policy conditions. A more recent projection has been made by Prognos in 1993.
- In a *second step* the sectoral figures were broken down by job activities (Prognos 1989). In order to consider the future impacts of technological and socio-economic change upon work tasks, an expert rating was used to identify those effects and their implications for modifications of the employment forecasts. Updates of the projection of work activities were made by Tessaring (1994) and by Prognos et al. (1996).
- The *third step* carried out by IAB (Tessaring 1991) produced a further breakdown of the activity forecast by levels of qualification within each activity. This step was updated by Tessaring in 1994.

The procedure of the joint forecasts of IAB and Prognos is illustrated in figure 3.

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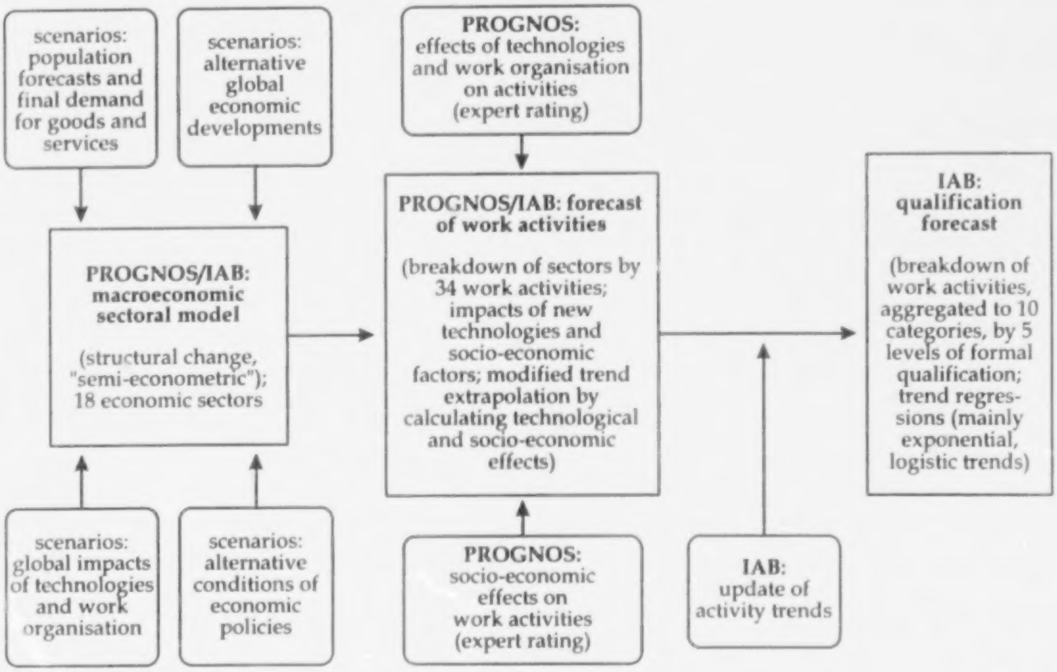
[7] In the following, the term "qualification" refers to the completed level of (formal) education and training.

[8] Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung (Federation State Committee for Educational Planning and Research Promotion), Bonn

[9] Prognos AG, Badel

[10] Institut fuer Arbeitsmarkt- und Berufsforschung der Bundesanstalt fuer Arbeit (Institut for Employment Research of the Federal Employment Services), Nuremberg

Fig. 3: ***EMPLOYMENT FORECASTING IN GERMANY: PROCEDURE OF THE JOINT STRUCTURAL FORECASTS OF PROGNOS AND IAB***


scenarios: population forecasts and final demand for goods and services
scenarios: alternative global economic developments
PROGNOS: effects of technologies and work organisation on activities (expert rating)
PROGNOS/IAB: macroeconomic sectoral model
(structural change, "semi-econometric"); 18 economic sectors
PROGNOS/IAB: forecast of work activities
(breakdown of sectors by 34 work activities; impacts of new technologies and socio-economic factors; modified trend extrapolation by calculating technological and socio-economic effects)
IAB: qualification forecast
(breakdown of work activities, aggregated to 10 categories, by 5 levels of formal qualification; trend regressions (mainly exponential, logistic trends)
scenarios: global impacts of technologies and work organisation
scenarios: alternative conditions of economic policies
PROGNOS: socio-economic effects on work activities (expert rating)
IAB: update of activity trends

Results

Sectoral manpower demand

Sectoral labour force demand is projected by using a macroeconomic model and additional scenarios which are based on assumptions concerning the impacts of, among other things, population change, global economic developments, technologies and work organisation or economic policies. In an update of their 1989 forecast, Prognos published in 1993 their first Report on Germany considering the changes due to unification in 1990. For a projection of global and sectoral employment a scenario was built which took into account the long-term developments of the Germanys economy and social system and the impacts on structural labour demand.

It predicted that until the year 2000 employment should stagnate at a level of 29 million and then should rise up to almost 30 million in 2010.

Irrespective of the slow employment increase, the past structural changes of *sectoral employment* are expected to continue. The Primary Sector (agriculture, forestry, fishing) will reduce its share in overall employment to 2%. Employment in the Secondary Sector (mining/quarrying, manufacturing, electricity, gas/water supply, construction) will decrease from 39% in 1991 to less than 34% in 2010. Correspondingly, the employment share of the tertiary sector (private and public services) will increase from 57% to more than 64% in the projection period. Within the service sector, public services are expected to increase more moderately than private services.

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- Work activities and qualifications

The shift in sectoral employment structures does not take into account that within all sectors jobs are becoming more and more service related. Manual work is decreasing in favour of service tasks either close to or remote from production. The number of physical goods produced in Germany is decreasing. In particular, production-related service jobs such as system engineering, controlling, logistics, machine operating, project management or strategic planning as well as marketing, technical and organisation services, advising, information and communication services are gaining importance. Personal services however are rather elastic concerning prices and consumer income.

Table 1: MANPOWER DEMAND BY WORK ACTIVITIES WEST GERMANY, 1993-2010 (%)

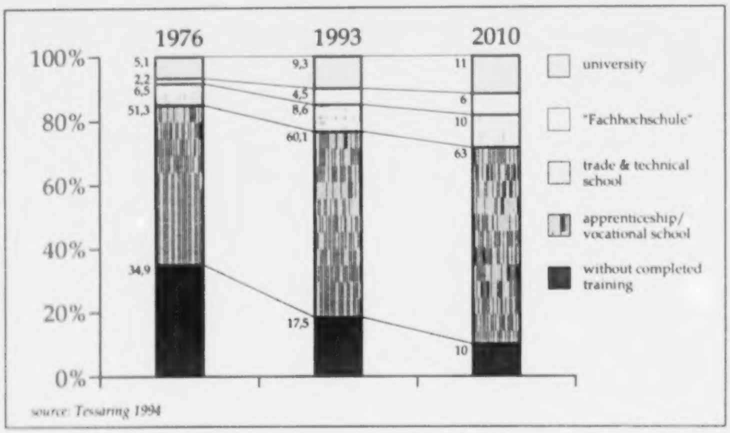
activity fields	work activities	2010 %	change 93-10 %*
secondary	training, care, law, information	17.3	1.0
service	organisation, executive tasks	9.1	2.4
activities	research, development. planning	5.1	0.0
primary	general + personal services	11.0	-0.6
service	clerical and assistant work	16.8	-1.1
activities	commerce, trade work	11.1	0.4
production	repairing, restoring	6.3	0.3
related	controlling, machine operating	10.7	3.1
activities	manufacturing, processing	12.6	-5.3
total		**100**	0

source: Tessaring 1994

The ongoing shift towards primary and secondary service jobs, too, is confirmed by the forecasts (Prognos 1989, Tessaring 1994). Production related jobs with a share of almost 39% in 1976 and of 31.5% in 1993 should decrease to less than 30% in 2010. In particular, manufacturing and processing work will shrink, whereas repair and restoration work and jobs related to controlling/operating machines and plants are increasing. Whereas primary service activities are expected to drop slightly, secondary service jobs are increasing to almost 32% in 2010. Within this field, jobs of organisation and executive work as well as counsulting and information tasks are growing above average.

As a consequence of the shift in the sectoral and job structures as well as of increasing qualification requirements, the demand for qualified and highly qualified manpower is expected to rise further (figure 4). Jobs for unskilled people are expected to decrease to around 10% in 2010. The employment losses for unskilled workers are highest in primary and secondary service jobs. Workers with completed apprenticeship or trade & technical training should increase their share from together 69% in 1993 to 73% in 2010.

Fig. 4: *MANPOWER DEMAND BY QUALIFICATION, D-WEST 1976 - 2010 (%)*



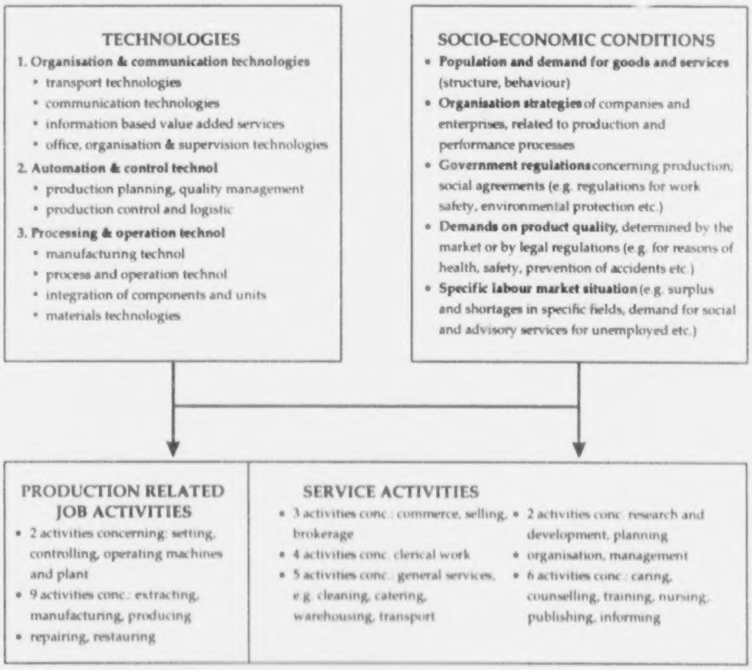
source: Tessaring 1994

Because of the high employment gains for secondary service jobs, the demand for highly qualified manpower at university and Fachhochschule level is expected to increase further above average: Their share in 2010 could total 17%-18%.

- Impacts of technological and socio-economic factors

A recent update of the impacts of technologies and socio-economic factors on job activities by Prognos (Prognos et al. 1996) confirms the ongoing increase of job requirements. They distinguish the following influencing factors:

Fig. 5:



TECHNOLOGIES

1. **Organisation & communication technologies**
   - transport technologies
   - communication technologies
   - information based value added services
   - office, organisation & supervision technologies
2. **Automation & control technol**
   - production planning, quality management
   - production control and logistic
3. **Processing & operation technol**
   - manufacturing technol
   - process and operation technol
   - integration of components and units
   - materials technologies

SOCIO-ECONOMIC CONDITIONS

- **Population and demand for goods and services** (structure, behaviour)
- **Organisation strategies** of companies and enterprises, related to production and performance processes
- **Government regulations** concerning production; social agreements (e.g. regulations for work safety, environmental protection etc.)
- **Demands on product quality**, determined by the market or by legal regulations (e.g. for reasons of health, safety, prevention of accidents etc.)
- **Specific labour market situation** (e.g. surplus and shortages in specific fields, demand for social and advisory services for unemployed etc.)

PRODUCTION RELATED JOB ACTIVITIES

- 2 activities concerning: setting, controlling, operating machines and plant
- 9 activities conc.: extracting, manufacturing, producing
- repairing, restauring

SERVICE ACTIVITIES

- 3 activities conc.: commerce, selling, brokerage
- 4 activities conc. clerical work
- 5 activities conc.: general services, e.g. cleaning, catering, warehousing, transport
- 2 activities conc. research and development, planning
- organisation, management
- 6 activities conc.: caring, counselling, training, nursing, publishing, informing

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The authors draw the conclusion (Prognos et al. 1996) that, also in the light of recent developments, the shift continues from unskilled to skilled job activities as a consequence of the technological and socio-economic influences. Production related jobs, parts of clerical and general service jobs will retrench even more than predicted at the end of the 80's. The same is true for the shift from production to service related jobs which is expected to continue over the medium and long run. The intensity of this displacement effect is also expected to be higher than in the recent years.

3.2.2. *Forecast of manpower demand by Weisshuhn et al.*

Another projection of the structure of manpower demand carried out by Weisshuhn/Wahse/ König (1994) covers the period from 1990 to 2010 and includes East Germany. The forecast is done for employment structures by industrial sectors, by occupations and qualification levels. For East Germany an 'adaptation scenario' is calculated on the basis of the employment patterns of 1989. The assumption is that the nature of the East German labour market will have adapted to that of the West by 2010 at the latest.

A look at the qualification structure of the major sectors of the economy in West Germany reveals several trends. When taking together the qualification structures for all economic sectors and occupations, the projection indicates a clear trend towards higher qualification requirements. From 1990 to 2010 the loss of jobs for workers without formal vocational training will be dramatic. The percentage of skilled workers with formal apprenticeship training[11] will grow but by far the highest growth in demand is predicted for higher education of the Fachhochschule type.. Employment for university graduates will grow above average as well, albeit not as much as for Fachhochschule graduates.

3.2.3. *Manpower supply and recruitment demand by levels of qualification*

The projections of the qualification demand by Tessaring/IAB and Weisshuhn et al. were supplemented by supply projections worked out by the Federation and State Committeefor Educational Planning and Research Promotion (Bund-Länder-Kommission, BLK) 1994.

The BLK uses transition models and distinguishes between

- the new supply of future graduates;
- the replacement demand which is equal to the number of those leaving the labour market, e.g. by retirement or death;
- Both together result in the total supply by levels of qualification and can be compared with the demand projections (manpower balance);
- Replacement demand and demand change (result of the demand forecast mentioned above) taken together, indicate the recruitment demand and thus the employment chances of the future graduates of the education and training system.

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[11] Apprenticeship, full-time vocational school, trade or technical school, master craftsmen schools.

The results[12] show that the new supply of unskilled workers will exceed demand dramatically and thus will lead to a substantial deterioration of their employment chances. On the other hand, the future demand of craftsmen may be higher than the future new supply and hence could cause shortages for this qualification group. For higher qualified people (who completed training at Fachhochschule or University), the new supply could exceed demand to a smaller or karger degree, according to the calculated projection variants.

Since both forecasts - the demand as well as the supply projections - do not take into account that substitution effects are larger than those in the past, the balance results should be taken with a grain of salt, however: As in the past imbalances in partial labour markets are expected to result in adaptation processes (substitution or mobility) which could mitigate the employment risks. Thus it is to be expected that qualified workers on the intermediate level will increasingly enter jobs which previously had been hold by lower skilled workers. On the other hand, university graduates or, in particular, Fachhochschule graduates will be entering some segments of the labour market which previously had been occupied by people with completed initial or further continuing vocational training.

Due to the overall deficit of jobs - compared to the labour force potential - the future labour markets will be characterised by an ongoing selection of workers, where those with lower skills or with interrupted labour careers (e.g. long-term unemployed) will have the poorest chances.

3.2.4. *Policy conclusions*

On the background of the forecasts a number of problems are arising concerning the future labour market structures in Germany and their implications for educational and training policy. They are marked by specific problems in East Germany where the transition process is not expected to be terminated within the next decade. Educational policy measures, however, cannot but marginally contribute to employment growth in the short and medium-term. But an enhanced skill level of the population and workforce can support structural change and the allocation of persons and jobs by measures of a future-related education and training. Taking into account the freedom of individual educational and occupational choice, an efficient educational counselling and the implementation of attractive educational and vocational opportunities are necessary. In this context it is important[13]

- to offer educational opportunities in a sufficient number which ensure that the individual can enter and complete an appropriate training course,
- to timely identify insufficient or mismatched qualifications of the individual,
- to implement educational offers which take into account structural labour market and employment changes,
- to realise equal opportunity for general/theoretical training and for practical training and to improve the permeability between the different education and training courses,
- to offer sufficient further training courses in order to minimise the risk of unemployment or to facilitate a re-entry into working life.

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[12] In the following the balance is discussed for the demand forecast of IAB (Tessaring 1994) and of the BLK supply forecast 1994.

[13] cf. BLK 1994, pp. 67 f.

3.3. Forecasts in Europe and other countries

In Europe relatively few research institutes undertake quantitative occupational and qualification forecasting on a national level. Forecast results were available for Ireland, the United Kingdom, the Netherlands and Finland and an older one for France. Most of these forecasts follow a similar procedure: On the basis of econometric forecasts of employment in the whole economy and by industrial sectors, the trends are further broken down by occupations and qualifications and then these structures are extrapolated into the future (Manpower Requirement Approach). The supply projections followed the procedure described above.

3.3.1. Manpower demand by industrial sectors

Concerning future employment by industrial sectors, forecasts confirm the ongoing importance of employment in the service sectors, a stagnating or only slightly increasing employment in manufacturing and the continuing employment decrease in agricultural sectors[14]. Thus, the theory of Fourastié and the hypotheses of a post-industrial society referred to above, are confirmed as for the employment change. Table 2 summarises forecast results for some European countries.

Table 2: ***LONG-TERM EMPLOYMENT CHANGE BY INDUSTRIAL SECTORS. FORECAST RESULTS FOR SEVERAL EUROPEAN COUNTRIES (SHARES IN TOTAL EMPLOYMENT, IN %)***

country, year	agriculture, forestry, fishery	manufact., energy, construction & transport	private or market services	public or non-commercial services	Total
West-Germany					
1976	6.3	45.2	25.7	22.8	100
1991	3.3	39.3	38.1	19.3	100
2000	2.5	36.4	40.0	21.1	100
2010	2.0	33.6	41.6	22.8	100
Finland					
1970	20.6	42.0	23.9	13.6	100
1990	8.0	36.2	27.5	28.3	100
2010	4.9	32.1	30.5	32.5	100
Ireland					
1981	16.6	32.1	33.2	18.1	100
1991	13.7	28.4	37.7	20.2	100
1998	10.0	28.3	41.2	20.5	100
Netherlands					
'93/'94	4.3	27.7	39.6	28.4	100
2000	3.4	27.0	41.5	28.1	100
United Kingdom					
1954	9.1	34.5	41.0	15.4	100
1994	2.6	18.5	54.2	24.7	100
2001	2.3	16.6	57.4	23.6	100

note: that the figures are extracted from publications that did not always describe the sectors included in detail. Therefore some of the results may not be fully comparable across countries. However, the these results focus on the comparison of time frame of structural change

sources: ROA 1995 (NL); Wilson/Webb 1995 (UK); Canny/Hughes/Sexton 1996 (IRL); Prognos 1993 (West-D); Poropudas 1994 (FINL)

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[14] This refers only to employment independent from the production of goods and services in these sectors.

3.3.2. Manpower demand by occupations

Available evidence on future demand trends concerning the occupational structure of jobs indicate significant growth in professional and technical occupations, and in administrative and managerial occupations. Table 3 shows forecast results for some European countries as well as for Australia, USA and Japan. The results show the relatively low growth in production and service occupations and the significant decrease for agricultural occupations.

Table 3: EMPLOYMENT CHANGE BY OCCUPATIONS RESPECTIVELY WORK ACTIVITIES: FORECAST RESULTS FOR SOME INDUSTRIAL COUNTRIES

occupation	Australia		Finland		Ireland		Japan		United Kingdom		USA	
	2001 %	Change 91-01 %*	2010 %	Change 90-10 %*	1998 %	Change 91-98 %*	2000 %	Change 91-00 %*	2001 %	Change 94-01 %*	2005 %	Change 92-05 %*
Professional and technical	20.9	1.6	) 31.5	) 9.4	17.8	1.6	14.8	3.8	20.3	1.7	19.3	2.1
Administrative and managerial	8.2	0.2			11.3	1.2	3.9	0.1	18.5	1.3	10.3	0.3
Clerical and related	16.5	-0.4	12.3	-0.4	14.2	0.3	19.5	1.0	14.6	-1.3	17.2	-1.2
Craft and skilled manual	16.0	0.4	) 19.9	) -7.4	12.8	0.3	) 42.2	) -2.1	12.5	-1.3	10.4	-0.8
Production, service and labourer	22.5	-1.8			15.1	-1.2			25.7s	1.7	29.6	0.2
Sales worker	13.6	0.7	31.5	1.3	18.6	1.4	14.8	0.2	7.4	-0.1	10.6	-0.1
Agriculture and related	2.4	-0.8	4.8	-2.9	10.2	-3.6	4.7	-2.5	1.0s	-2.0	2.5	-0.4
total	100		100		100		100		100		100	

France	2000 %	Change 82-00 %*
self-employed	8.9	-1.0
senior and middle management	21.3	6.6
civil service	14.8	0.1
teaching	5.8	0.6
service employees and personnel	19.2	3.1
manual workers	25.5	-5.9
farmers, agricultural workers	4.6	-3.5
total	100	0

* *change of percentage shares (in %-points)*

s = estimated

sources: Jagger/Morris/Pearson 1996 (AUS, JAP, USA); Wilson/Webb 1995 (UK); Canny/Hughes/Sexton 1995 (IRL); Poropudas 1994 (FIN); Tessaring 1994 (West-D); Rajan 1989 (F)

3.3.3. Future qualification requirements

In general the available European qualification forecasts confirm, , the rising skill requirements of jobs. This applies above all for most levels of higher education and for some groups of skilled manpower on the intermediate level. Forecast results for the intermediate skills however, are not homogeneous in their direction and scope. A general trend to be found in all countries concerns the dramatic decline of job opportunities for low skilled and unskilled workers.

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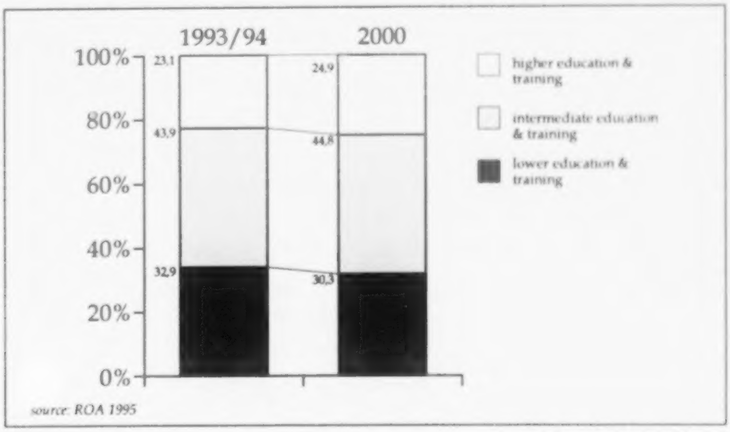
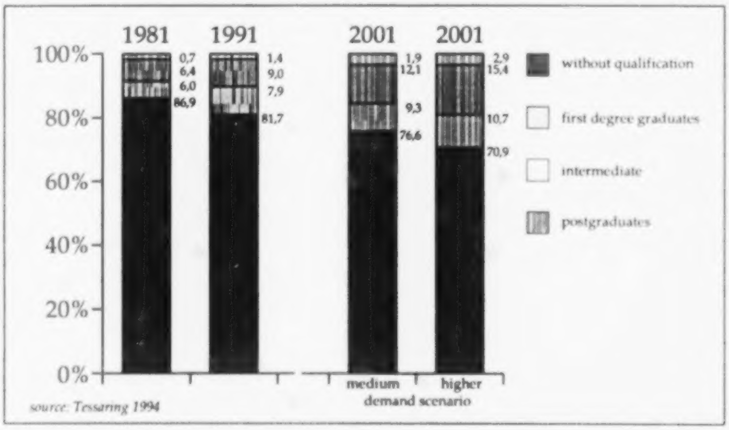
Fig. 6: ***EMPLOYMENT BY LEVEL OF QUALIFICATION; NETHERLANDS 1993/94-2000 (%)***



source: ROA 1995

According to forecasts carried out in the Netherlands by ROA (1995), the next 5 years will see an ongoing shift of demand from lower to higher levels of education. Lower levels lose demand as the are employed in occupations that grow relatively slowly or will decrease. And employers will require more and more higher qualification levels for their job offerings. This upgrading process leads to a further decrease in demand for workers without a qualification or those at lower vocational levels.

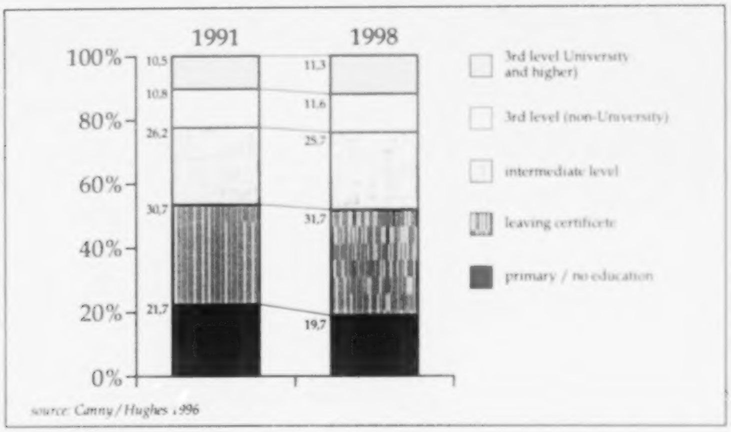
Fig. 7: ***MANPOWER DEMAND BY QUALIFICATION, UK 1981 - 2001 (%)***



source: Tessaring 1994

Demand projections for the highly qualified in the United Kingdom are carried out by IER (Wilson 1995). IER draws the following conclusions from its results: Looking at the forecast "results from a wider labour market perspective, there seems likely to be a sustained trend towards the employment of more highly qualified people. Yet the success with which they are deployed will affect the prospects for other less qualified groups. ... The results actually imply a surplus of those at intermediate educational levels, though the surplus is likely to be proportionately smaller than those applicable to qualifications and skills below intermediate level."

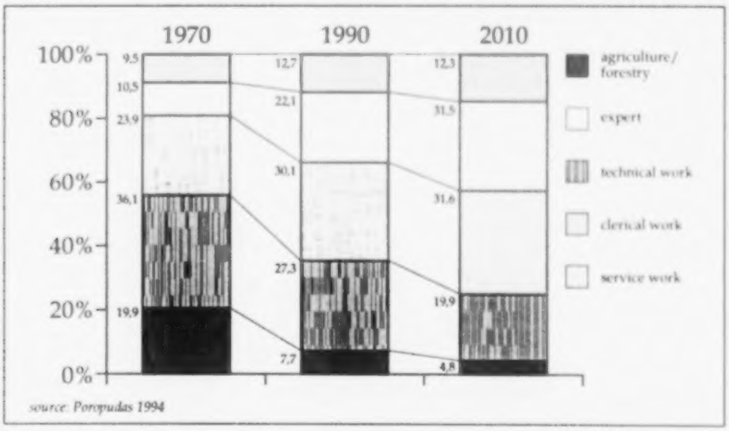
Fig. 8: MANPOWER DEMAND BY QUALIFICATION, IRELAND 1991 - 1998 (%)



source: Canny/Hughes 1996

According to forecasts for Ireland by ESRI (Canny/Hughes 1996), trends in sectoral and occupational structure of employment are closely linked to a rise in skill requirements. A demand increase is expected for people with general and vocational secondary school-leaving certificates or people who have successfully completed university or non-university higher education. This will be offset by a drop in the need for workers on the intermediate qualification level and is more or less zero for people only having completed school education, or initial training.

Fig. 9: MANPOWER DEMAND BY OCCUPATIONAL GROUPS, FINLAND 1970 - 2010 (%)

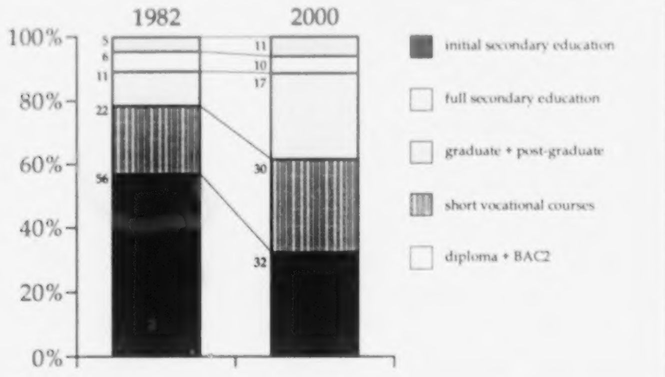


source: Poropudas 1994

Occupational and qualification forecasts in Finland (Poropudas 1994) are carried out by the Finnish Council of Educational Planning on behalf of the Ministry for Education.,. A report compiled by the Finnish Labour administration (Työministeriö 1996) evaluates the short and long-term trends in the supply and demand of labour to the year 2010, with additional projections for 2010-2030. The report addresses several problems the Finnish economy is confronted with: the sharp rise in unemployment in the early 1990s, the impacts of international upheavals and of European integration, the demographic development and the changing sectoral and occupational structure of employment.

The report concludes with the statement, that "Finland has fairly realistic potential to establish its economy and employment on the road to healthy, long-term development. The risk of chronic high unemployment looms large, however. Economic growth will be increasingly reliant on professionalism, specialised expertise and more efficient and less wasteful use of resources. This effectively marks a shift towards the information society, promoting greater productivity, efficient use of capital, sustainable use of natural resources and more labour-intensive production." (Työministeriö 1996, summary)

Fig. 10: MANPOWER DEMAND BY QUALIFICATION, FRANCE 1982 - 2000 (%)



source: Rajan 1989

In France, an earlier projection of BIPE/Haute Comité d'Education Economie (1987) until the year 2000 resulted in a decrease of agricultural occupations and a significant increase of civil service, teaching, managerial and other service occupations. Another finding was that the educational level in all occupational groups will change in favour of high qualifications - irrespective of the growth or decline of this occupation. Qualification levels are also expected to increase for the self-employed (Rajan 1989).

3.3.4. *Summary*

By way of summary, it can be said that despite different methods, delimitations and educational systems of the countries under consideration, the forecasts come to the conclusion that structural change in industry and society goes hand in hand with a major increase in the qualification requirements of the work force. Individuals with low level or no vocational qualifications who already today face the most difficult problems on the labour market will probably have a small chance of finding stable and promising employment in future.

The future development of employment amongst those with intermediate qualifications, i. e. people who have completed initial in-school or in-plant training is assessed differently in some cases. All forecasters do, however, stress that on this level considerable substitution processes are to be expected and that these qualifications are viewed as problematic unless they are made more attractive. Equal esteem of practical and theoretical education and training can best be achieved in the employment system through income, adequate employment, career prospects and further training opportunities.

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Challenges of incorporating labour market requirements in the vocational training system: Slovenia

(Anton Kramberger)

The paper summarises broader processes influencing the current reform attempts to improve the vocational education and training (VET) system in Slovenia. It starts with the industrial modernisation process. The recent changes in the labour market and institutional arrangements concerning skill workers are discussed. Terminological dilemmas regarding the occupational aims of the current VET reform are elaborated, and their impact on labour market analysis is outlined.

1. Late (industrial) modernisation in Slovenia - occupational approach

Slovenia, as one of the smallest nation-states in Europe, has about 2 million inhabitants. It lies in the most south-easterly region of the Alps, with the Pannonian plain to the east and to the south the Adriatic sea. Historically, Slovenia's ties have been mostly with Austria, but also with Lombardy, Veneto, Friuli, the Czech lands and southern Poland. Its weak aristocracy was mainly German-speaking until this century.

The late modernisation process (toward industrialisation) in Slovenia, also reflected in the changes in the occupational structure (Table 1), began very suddenly after the 1st World War. At that time, Slovenia happened to become an actor in the new Kingdom of Yugoslavia. Until the beginning of the 2nd World War, Slovenia was merely a rural region with a lot of craft and weak, family-based local industries, and a dependent banking sector of the holding type.

After the 2nd World War, it succeeded in extending its comparative strengths in large-scale production to a broader market than ever before. The accelerated structural changes can best be seen in the dramatic decrease of farmers and an increase in non-manual workers. A special sub-period of rapid development and structural change occurred from about 1970 on. The occupational structure underwent great changes. Changes were especially strong in the seventies, when the social distances between particular occupations widened rapidly. This was mainly due to the immigration of the unskilled labour force from less developed regions of the former Yugoslavia into Slovenia. Inflows were preceded by emigration outflows of the skilled Slovenian labour force to Western countries (Germany), seeking a better quality of life after the economic crises of the sixties.

Table 2: GLOBAL CHANGE IN OCCUPATIONAL STRUCTURE (BROAD SOCIAL CLASSES) OF THE ACTIVE POPULATION IN SLOVENIA, FROM 1931 UNTIL 1994, IN %

Broad Occupational Clusters	1931	...	1968	1980	1989	1994
Farmers	60.5		27.8	11.0	9.0	9.4
Manual Workers	21.1		40.1	46.8	40.9	38.7
Non-Manual Workers	18.4		32.1	42.2	50.1	51.9
TOTAL	100.0		100.0	100.0	100.0	100.0

Sources: Census 1931 (SURS,Archive of the Statistical Office of the Republic of Slovenia) - SJM Surveys 1968, 1980, 1989 (Public Opinion Pool in ,Slovenia, Niko Toš, Faculty of Social Science, Ljubljqnq) - Labour Force Survey 1995, SURS (ISCO-88 codes for occupations), SI-183/1995

In the seventies and eighties, due to market-oriented institutional reforms, albeit in extensive plants, the number of economic subjects, i.e. firms, enterprises and their aggregate associations, doubled, and the number of managerial positions doubled, too. Holding types of financial conglomerates, including banking, industry and policy actors, emerged at national level in Slovenia. They were supported by economic and political networking, by attractive opportunities in open eastern European markets (clearing business arrangements), and by a high inflation, financial environment. At the end of this accelerated development, a lot of heretofore hidden economic and structural imbalances appeared. This resulted in a rapid rise in unemployment and in troublesome experiences for the less competitive industrial sectors in the early 90's. The more recent situation is quite difficult, especially for farmers (extensive production on small-sized plants requires large public subsidies) and low qualified workers (waves of redundancies due to privatisation and contracting in large-scale industrial sectors).

On the other hand, the rapid development of the managerial sector, as seen in the changed occupational structure, was already under way long before the Slovenian Independence Act in 1991[15]. The increased structural occupational mobility after the reforms in the 70's was analysed and described by Kramberger (1990), showing specific homogeneity of managerial occupational clusters. After the "velvet revolution", the old and the newly emerged national elites took over the exposed "transitional tasks" in Slovenia. A point of interest at this stage; inhabitants from northern regions of Slovenia had significantly higher chances of being actively involved in the political and economic restructuring - due to the uneven specific political heritage of the southern regions (Kramberger, Mrvar 1996). From the micro perspective, some analysis "suggests that in the period between 1989 and 1995 the integration of different sectors of Slovenian elites increased while the pattern of this integration became increasingly hierarchical", depending more and more on political elites (see Iglic, A. Rus 1996:286).

Despite the above-mentioned social dynamics, characterised by a mixture of institutionally planned actions and market forces, the underlying stratification process as measured by linear trends of social mobility during the whole 20th Century shows systematic diminishing effects of parents' influence over their offspring's' occupational achievements[16]. It means, that even the half century long period of socialist de-stratification policy in Slovenia couldn't deny the basic developmental trends towards a more market and more merit selective society.

2. Socialist institutional arrangements, continuity and transition challenges

A kind of underlying continuity can be found in nearly all kinds of public activity, which is not surprising given the increased reform efforts of various actors. It is then worthwhile to describe at least briefly some characteristics of previous arrangements. A general feature of the former socialist system (Yugoslavia, Slovenia) was a peculiar combination of decentralised and political control at local level[17]. Enterprises and public authorities were

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15 Slovenia declared itself independent by referendum in December 1990 by a great majority and it gained international recognition, after the failure of a brief Federal Army attack in mid-1991, at the end of 1991.

16 These are first results of research on social mobility trends in Slovenia during the 20th Century. The research group (Kramberger, Nieuw Beerta, Ganzeboom) is working on larger data sets, so the report is still in progress.

17 This short comment is supported by the OECD Report (1997, for internal governmental discussion), including expert estimates of national labour market institutional arrangements and data quality in Slovenia.

interconnected. Specific institutions, called 'self-management bodies'[18], were established to follow administrative and policy-making procedures in municipalities, schools, social insurance, employment offices, and elsewhere . Their initial goal was to promote social consensus, but over time they became more and more inefficient. A typical characteristic for that situation was a relatively open flow of information between enterprises and public authorities. Such policy practice also had an important impact on strong educational links with labour markets, especially at the vocational skills levels.

Institutional arrangements encouraged non-rational decisions in firms. Managers tried to accommodate political demands. Such practice of 'soft budget constraints' (in Kornai's words) was too costly for market and for public activity, also if compared with more competitive societies. It needed large non-market transfers to many subjects in the form of direct subsidies, tax breaks and cheap credits, which also weakened market power in the banking sector. The resource allocation process of capital and labour became very complex, inefficient and far too expensive.

In the current process of gradual restructuring of the former (over)contractual system, the main aim is to produce appropriate re-structuring reform measures. They should provide more market economy rules for efficient business, encourage market processes (deregulation, privatisation) and make public management and performances more transparent. While market-clearing mechanisms are inevitable for firms, the public administration's approach is not very coherent or goal-oriented. It continues to administer in an old fashioned way, using old practices instead of new ones to resolve new problems.

In a way, the continuity in public sector practices may even prove to be helpful, as all kinds of intermediary interventions are used. Reforms are thus more feasible and transition does not need to develop in a vacuum or suffer due to lack of actors. However, in order to improve public activity in the near future, it is necessary to develop some very clear new goals. If this does not happen, existing continuity might result in some expected damages. For example, administration can simply use bureaucratic procedures instead of procedures which are sensitive to environmental demands. Such public policy practices may become self-determined and anachronistic. As a result, current VET reform in Slovenia may be affected.

3. Relaxed labour markets and vocational skills

The opening of the country, i.e. the economy and politics, to international competition, seems less harmful[19] than the opening of labour markets and employment relations, although these things are connected. The current disintegration of the former contractual employment system[20] was also an expected consequence of the hidden unemployment, detected already in the early 80's by some economists (i.e., see Mencinger 1982). But the expected disintegration is still accompanied by regional segregation of problems and this is causing more concern.

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[18] Its legal corollary was 'social ownership' (the abolishment of it is a well known process of privatization).

[19] Although until 1990 Slovenian enterprises primarily occupied a prominent position in the former Yugoslav market, a lot of them have a long-standing orientation towards trade with the outside world. The country is highly dependant on foreign trade, with export revenues corresponding to over half of GDP. Most of the trade is with the European Union (Germany, Italy, France, Austria - these countries amount to about 60%), and both directions of foreign exchange are balanced and dominated by machinery and other manufactured products. So the economic situation is highly sensitive to fluctuations in the conditions for trade (business cycles in Western markets), also due to the small size or volume of the whole economy.

[20] Characteristics: 1/ the absence of explicit ownership rights; 2/ the adjustment of salaries according to redistribution of income; 3/ the indexing (limiting) of salaries regardless of the firms' market outcomes; 4/ pay scales within enterprises are regulated by referendum (branch agreements on pay scales); 5/ worker's security against dismissal (see Orazem, Vodopivec 1994: 22-23).

There are some signs that even active labour market policy has not helped in protecting the weaker work groups. Open labour markets differentiate labour market success of various educational and occupational groups significantly more than before. This has become a typical feature of the more relaxed labour market in Slovenia[21]. The price of "human capital (education & experiences) seems to be dramatically increasing in the transition process" (Orazem, Vodopivec 1994:81). Personal income analysis shows that vocational school graduates compared to all other school graduates have gained least from the transition, if those with lower educational attainments, i.e. with or without a completed primary education, are taken as a baseline (*ibid.*, p.31).

In relation to people's occupational mobility in the labour market, the most important economic feature of the Slovene transition is the dominance of **demand factors** (*ibid.*, p.38). People's positions and occupations now depend much more on the type of industry or industrial sector of their company than on their education, skills, experience or even sex[22]. Consequently, the message is: the occupational career of people is getting less and less dependent on their "vocational" education attainment[23]. This does not of course imply that vocational education is insignificant. There is indeed a constant growing awareness of questions such as how to improve flexibility in low-skilled people, how to implement less specialised and more promising vocational education, etc.[24].

4. Occupational concerns regarding terminology and VET reform

One of the more salient problems during the first years of VET reform in Slovenia concerned terminology and especially the key word of the reform - vocation. The main problem during the initial stages of the reform was not - as one from the outside world would expect - a sudden loosening of tight regulation links between vocational credentials (as educational issues) and occupations (as work place issues). The real problem was the fact, that in the Slovenian language - for reasons which will be explained a bit later - only one term , i.e. "poklic", is used for both of the above mentioned meanings (the supply and demand side of a labour market). How can only one single term be simultaneously connected to two different sides of labour market? This question may seem strange, but for the educational authorities and labour market agents in Slovenia, it has only recently become relevant. Its solution is sure to affect the measuring process of educational and occupational achievements considerably and also the acceptance of the derived quantitative information on a VET situation for the decision-making process.

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[21] Characteristics of the labour market regulation reform: 1/ the right to make decisions belongs to company owners (1989); 2/ The determination of salaries on the part of company management is a relative right (minimum salary for nine categories of workers has been defined by collective contracts since 1990. Salaries are indexed according to life expenses, the range of pay scales within companies is limited by law); 3/ employers can dismiss employees by offering financial remuneration (education, retraining, redundancy payment etc.); 4/ the state introduced early pensions between 1990-1992 as a means of preventing an increase in unemployment (these are the highest compensation pension rates among transitional countries). In 1997, new labour regulation started the legislative procedure.

[22] High activity rates for both sexes are a basic feature of Slovenian labour force (participation of 15-64 age group in the labour force was 72% for men and 62% for women in 1996).

[23] This conclusion is, according to some evidence, above all important for unbalanced periods in certain economies, which are far from an economic and market equilibrium.

[24] It would be interesting to test Kerckhoff's (1995) hypothesis on these topics.

The current Slovenian VET reform actors therefore needed some time to define the terminological issue as one of the crucial points for further reform steps. Just recently they have come to a kind of consensual solution[25]. Why is this? As the answer to this is quite illustrative and as similar problems may arise also in other transition countries, it is worthwhile to briefly summarise the lengthy discussions on the topic in Slovenia.

For this report, it is useful to look at the terminological problem from two perspectives: linguistic, which is a minor problem and concerns more past history, and substance, which is a major problem and concerns recent history.

4.1. The linguistic aspect – a minor part of the problem

The minor part of the so called terminological problem in Slovenia arises from the fact, that it is rather hard to find an appropriate and adequate Slovenian word for the English term "occupation". As, for example, the Slovenian labour market arrangements are more likely to observe the German situation than the English one, historically Slovenian policy and professional actors faced with the lack of domestic expressions for new situations (nearly) always tended to adopt equivalents from foreign languages. This can be illustrated in a number of different ways. For example, in both Slovenia and Germany, the corporatist tradition of education-labour market arrangements is stronger than in England[26]. Also, in both countries the term "vocation" (lat. voco) as a linguistic term for determining one's occupancy in a work place, still prevails over a more general English term "occupation" (lat. occupo).

In both Germany and in Slovenia, the general notion of the English word "occupation" is nearly missing in ordinary speech, while talking about particular jobs, job clusters, and particular work places. Another word, "zaposlitev", meaning "employment" in general, is perhaps too broad to indicate a strong feeling of one's ability (or even "calling"), which is often implicitly present in both Slovenia and Germany when talking about one's occupation or occupational career.

In Germany, because of highly controlled industrial relations[27], specialised educational programmes may lead pupils to "educational vocations" ("Ausbildungsberuf"), what in England would best be interpreted as "educational occupations". "Ausbildungsberuf" is understood as a work place with a special educational programme (cit…). Compared to vocationally oriented occupations, all other "occupations" - in the English sense of typical work places or job clusters - are called just "vocations" ("Beruf"), as there are no particular educational programmes[28].

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[25] A very recent discussion among educational authorities and experts finally came to some promising conclusions (24th October 1997).

[26] Similar corporatist arrangements of labour markets are seen in Denmark, with very strong control of particular work places by trade unions (see B. Greve 1993).

[27] But far from being completely controlled, as might be read from several research reports (…).

[28] Aa archaic original word, from which the word "Beruf" stemmed , is in German the term "Ruf", and can be treated as synonymous with the English term "call", which has nearly vanished from English 'labour market vocabulary' over time.

Similarly, in Slovenia, for all the craft and skilled jobs, connected to special vocational education, from the 19th century on, a general term, "strokovni poklici", was used. The first word in the expression indicated (i.e. the adverb ' strokovni' (*n.* 'stroka')), a general term for all educationally supported crafts or vocations; the second part indicated (i.e. "poklici",) a common name for work places. The word "vocations", is used here (not occupations, but see the explanation above). All other jobs or job clusters were called just "poklici", i.e. "vocations", without any adverb.

If we use another illustrative comparison here, the relation between the two terms "vocation" and "occupation" in English can be transformed meaningfully and equivalently into "Ausbildungsberuf" and "Beruf" in German. For a better understanding of this multilingual parallelism, showing the key (historic and corporatist) differences between English and continental linguistic solutions refer to Table 2, below. From this comparison it is perhaps more evident that only in English two different Latin roots are used (*voco* and *occupo*), while in other countries, basically only one Latin root (voco) with some adverb is used to describe the two different kinds of occupations on the labour markets, i.e. vocations and all other occupations.

Table 2: COMPARISONS OF HISTORIC AND CONTEMPORARY EXPRESSIONS/ WORDS FOR LM OCCUPATIONAL ANALYSIS

LM side	English	German	Dutch	Slovene
	a) Historic expressions (when LM undeveloped)			
Both	Craft	Fach	Vak	Obrt
None	Manual Work	Handwerk		Rokodelstvo
Demand	Call (religious and political)	Ruf	Roep	Klic (also "poklicanje")
Both	Vocation (historical)	Beruf	Beroep	Poklic
	b) Contemporary expressions (when LM developed)			
Supply	Education	Ausbildung	Opleiding	Izobraževanje
Both	Vocational Education	BerufsAusbildung	Beroepsopleiding	Strokovno izobraževanje
Demand	Vocation or "Occupation with Education"	AusbildungsBeruf	Opleidingsberoep	Strokovni poklic
Demand	Occupation (general)	Beruf	Beroep	Poklic

As we have already said, the above differences constitute only a minor part of the terminological problem connected to the current VET reform aims in transition countries. With careful translation we will probably always reach the most appropriate solution. However, *the major part of terminological problems in transition countries* is not this linguistic aspect. A more important part of the problem is the substance aspect. This consists of a complex and persistent misunderstanding of what an occupation itself is or should be. This terminological problem is the result of recent political and policy actions of a socialist state and may be regarded as an effort on the part of socialist policy actors to establish a perfect and strong link between each educational program and each particular job or occupation. Let's elaborate on this point in more detail, because it will help us to understand why data on occupations from the recent past are not available or are mostly unreliable.

4.2. Institutional & political aspect – a major part of the problem

We can say that Slovenian linguistic solutions, indicating vocational and occupational differences at the start of the VET reform in the 90's – due to linguistic oversimplifications implemented during the socialist period – were even less developed than they were before the 2nd World War. Slovenia, which became part of Yugoslavia after the 2nd World War, adopted many foreign structural and linguistic solutions and influences for urgent developmental needs which arose as a consequence of rapid structural development in the country. However, new preferred influences and ideologies were also coming from the East. So, for example, instead of recognising even more the necessary distinction between the two kinds of "occupations", the more practically oriented "vocations" on the one side and the more free "occupations" on the other, the Slovenian political and education authorities in the early 50's, introduced a huge socialist vocational education reform. With regard to its verbal interpretation the authorities simply ignored this necessary distinction and began to treat an occupation as basically an educational issue! This was in line with the ideological denying of labour market performances as such.

The end result was a kind of intellectual disaster in educational policy and research[29]. The whole vocational education subsystem was first labelled as **"occupational education" ("poklicno izobrazevanje")**, reducing modern labour market understanding of supply and demand to something that can best be labelled as 'occupational labour markets'. No room was left to explain or to understand, firstly, the difference between "vocation" and "occupation", and, secondly, *the rest of education*, which was left out in the first wave of the "occupational education reform ". So, in the early stages of that reform, this 'rest', consisting primarily of gymnasiums and some higher education sectors, and was seen as a 'too general education' in the sense that it was nearly purposeless for a socialist society. Sometimes this 'rest' was also treated with suspicion because of its *elitist ambitions* and also the fact that it had no occupational aims or objectives.

After twenty years of relative autonomy regarding 'general education', the socialist authorities were finally able to 'correct' this initial omission. In the mid-70's they started a totally new school reform, called (occupationally) **"oriented education"**. It had a single and unique aim – to define in advance (*ex ante*) occupational territories which were permitted for particular educational programmes - also for all those particular educational programs (from middle to all higher school levels), which in the 50's had been for whatever reason left out of the "occupationally oriented education" mainstream[30].

The basic difference between "occupationally oriented education" reform objectives and the current VET reform aims, can be seen in Table 3, below. The point here is how to treat an 'occupation' and how on a conceptual level such treatment can influence information gathering and dissemination – if, for example, no freedom is left to firms in defining jobs or occupations, than nothing can distinguish qualifications from occupations.

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[29] It does not mean in any sense, that the knowledge transfer from teachers to pupils in schools was harmed significantly compared to western schools. However, it does mean, that the understanding of knowledge usage in firms was becoming less and less questionable.

[30] The inclusion of all career paths and educational levels into a common "occupational education" system was led by nearly the same team of experts as the one which today is introducing the current VET reform in Slovenia.

During the previous reform just anything concerning labour market demands disappeared or was changed in favour of educational planning objectives. Real demand factors, constituting real market tensions, were essentially omitted from all policy actions, and only prevalent education policy was considered during the last decades of the socialist period rather than understanding how (planned) labour markets might function. So the matching process and linkage problem of labour markets were omitted from discussions Since then in Slovenia - and even now - real labour market issues and education-occupation diversity is seen as a deviant result of a bad planning of education authorities, inefficient work carried out by employment offices, a failed social negotiating partnership , or even as an amusing statistical artefact, deriving from strange survey or coding processes.

Table 3: ***CHANGES IN THE UNDERSTANDING OF OCCUPATIONAL ARRANGEMENTS IN THE CONTRACTUAL LABOUR MARKET IN SLOVENIA (REFORM PERIODS VALID DURING 1952-1978- 1996!) - COMPARISON WITH GERMANY***

German expressions	LM side	LM side	Slovenian corr. expressions
Ausbildung	Supply	Supply	Izobra evanje
BerufsAusbildung	Both	Supply (?)	Poklicno izobra evanje (?)
AusbildungsBeruf	Demand	Supply (?)	Poklic (?)
Beruf	Demand	Supply (?)	Poklic (?)

From Table 3. it is evident that after the socialist "occupationally oriented education reform" every educational program tended to cover just one "occupation". All normal and traditional meanings of occupations were shifted from the demand to the supply side of the labour market. One can imagine, that in such circumstances educational authorities easily took possession of the term "occupation" and were rather unique and central policy actors of distorted labour market relations.

Such arrangements even functioned for a short period of time. Until the 80's there were no great problems in getting full-time salaried jobs. That is why active people, moving through different jobs during their work careers, were not very uncomfortable with quite a strange fact, that they were always carrying a "permanent occupation" with them. In other words, with safe jobs and fixed salaries, people were able to sell their competence anyhow and were for that reason quite indifferent to conceptual and verbal education-occupation confusion.

On the other hand, market actors, especially employers, who were becoming more and more autonomous in their market recruitment and promoting decisions - even under distorted labour market conditions - were rather confused. People, who were searching jobs, had their "permanent occupations" already written in their educational credentials. But these occupations differed from job descriptions which employers created. So, because of a total inaccuracy of the word 'occupation', they began to avoid it in recruitment practices. Having nothing better at hand to describe their differentiated work tasks and jobs, employers began to talk about various work places instead of occupations.

Union associations did not help in clarifying the confusion. In the framework of contractual labour markets, they were mainly concerned with working conditions, minimum and maximum wages, and with only paying attention to the broader educational level groups.

Some internal autonomous regulation of labour markets (see for example Marsden 1989) was left to occupational and professional societies. They generally looked for exceptions to general labour rules for certain reasons. As this was the only way to escape from general labour regulations, a lot of occupationally specific demands were directed to the authorities. Apart from traditional professions, we can detect such attempts or achievements in the heavy industry occupational groups, transport, policy and military occupational groups, but also by farmers, hunters, sailors, craft associations, etc. Politicians of all kinds were regarded as exceptions. The segmentation of the labour market was highly occupationally determined.

The labour market situation in the late 80's changed because of accumulated distortions. Political and market instability, accompanied by economic crisis, inflation and other factors - also international affairs - resulted in labour market information on labour supply and demand becoming explicitly more important in Slovenia. Employment and official statistics on occupational distribution were different and unreliable. Even when official statistics, by tradition, tried to measure occupations as job-related issues, the strange occupational classification, interfered with the usual coding process. The customs and habits of people, answering job-related questions, were similar to the customs and habits of interviewers: they both mixed up the concepts of education and occupation.

5. Channelling of mixed VET reform aims into a more agreed goal – a time consuming effort

At the point of understanding what an "occupation" could be, the 'velvet revolution' occurred. The "renewed" old educational and other authorities, although they had not yet completed all the steps of the previous "occupationally oriented education reform", were established in the late 70's. We have no firm reason to doubt their specific understanding of the term "occupation". However, a simple understanding of a one-to-one relationship between an education and an occupation still prevails in various contemporary VET reform discussions.

To be more precise, it is hard to imagine just how uneasy it is for several VET reform groups to cope with a new understanding of the VET reform aims, to now define quite a different understanding of occupation and to delegate different roles to social partners. Often individuals, mainly experts formerly, are faced with all kinds of semantic and other interferences in communications. They *have just completed the* previous "occupationally oriented education reform"[31]! But at the same time, they are expected to start another "vocational" reform, which is internationally validated. This new reform sets out to make the VET system more responsive to hitherto unknown labour market challenges. A lot of individual actors, who have already taken part in the reform may think that they have already done this, even though there may be some differences in its conceptualisation and implementation. It is not rare to hear such questions as 'Is this new VET reform essentially the same as a previous one?' 'What is the key difference?' On the other hand, some underlying questions, which have been submerged for decades, are gradually emerging again: 'What is an occupation?' 'What is a vocation?' Do the two differ in any substantial way?' 'And what has a labour market, a typical domain of economists, in common with any educational reform?' 'Why would a VET system be responsible and sensitive to any market failure?'

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[31] This is quite *normal*, as the legal continuity of educational policy demands a gradual closing procedure.

We can stop our discussion on the so called terminological aspect of the VET reform just here. Similar trends and problems - of melting two reform aims into one - might be expected from actors, in those countries, which were under the Soviet influence in the past[32]: The Czech Republic, Slovakia, Hungary, Bulgaria, Romania, etc. If we supposing that a long-term influence of contractual logic still has some effect on people's minds, in these countries one can expect similar and real 'terminological problems' with the current VET reform objectives.

Basic information for labour market analysis

A set of attempts for improvements in education and vocational education and training in Slovenia have had priority since 1990. Despite the fact that some of the above mentioned problems may still continue, it is quite likely, that because of accelerated international exchange of opinions, knowledge and expertise, the old problems will soon be recognised, de-mystified and solved. At least at the conceptual level, the understanding of current challenges to educational authorities and to market actors as well, will probably help the reform actors to introduce more appropriate action measures to cope with the real contemporary problems of the VET situation.

What seems extremely important for Slovenia at the moment is to develop a kind of sound information system, both quantitative and qualitative in nature, to cope with this new situation. Having good data bases, with an in-built monitoring system, is quite common practice in all those countries which have better mechanisms to detect the extent and nature of the so-called linkage problem in their labour market. Even with good data bases, it is not very easy to control the distortion and malfunctions of the labour markets and to react to them. But without them, it is very hard to develop a kind of sensitive and promising VET policy based on intuition alone.

Conclusions

The aim of this paper was to reconsider some problems existing in the current VET reform implementation. The focus is on a kind of continuity of former solutions and this may raise some questions as to whether the challenges of the new situation have been altogether understood. Some policy discussions in Slovenia show that very different previous understandings of the new VET reform aims have recently converged (Svetlik 1997). However, there is some hesitation, connected to prestige questions and to unavoidable re-distribution of the former institutional power conducting reform efforts, which is still *preventing the reform actors from a common agreement on how to move ahead strategically.*

Market performances are already transmitting information on labour market mismatches to reform actors. But the organisational settings and communication structure of the reform decision makers have not yet been organised sufficiently to provide solutions on how to cope with the challenges. So, political discussions still prevail over professional ones. Quantitative information is not being used in the decision making process. Emotions and interests strongly interfere with the more rational systematic choices. The labour market as such is not yet *the* signal for appropriate long-term information collection and labour market analysis. The few research results on labour market requirements, concerning VET education and the usage of manpower resources, have not yet been tuned and placed at the centre of policy decisions.

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[32] See confirmation of this hypothesis in the proceedings from the International Conference on Regulation Classifications in the reformed VET system (Kramberger, ed., 1997).

However, if yesterday's pictures and impressions do not have too much influence on today's questions about tomorrow's challenges, then the chances are, that the whole VET reform in Slovenia will move ahead more quickly than one would expect, and without losing the idealism of some new generations of youngsters, who are now about to make their first educational and occupational choices.

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Linking labour market analysis and vocational training in the United Kingdom
(Mark Edgell)

As with any sort of analysis there are differences in scope, purpose and impact. And this is indeed the case in Britain.

There is a considerable amount of work under way in the UK at the national, regional, local and sectoral level in gathering and analysing information about trends in skills needs and wider trends in the labour market. The main components are:

- national level research, forecasts and analysis provided by the Department for Education and Employment,
- labour market assessments undertaken by the network of 80 plus locally-based Training and Enterprise Councils (TECs), or local enterprise companies in Scotland, in connection with their corporate planning,
- regional and sub-regional groups consisting of representatives of TECs, Regional (Government) Offices and the Further Education Funding Council who are charged with advising on Further Education college plans and the adequacy of provision in their areas,
- work of the Employment Service (ES) Regional Employment Intelligence Units in advising ES local managers on labour market trends,
- work done by National Training Organisations in assessing the skill needs of their particular sector,
- work done at all geographical levels by academics, think tanks, private research organisations, sometimes on behalf of the aforementioned bodies.

It would be fair to say that the quality and extent of the work varies from sector to sector, TEC to TEC and region to region. In many regions there are labour market forums or consortia which help in sharing information between agencies and can pool resources for research. Additionally the extent of co-operative working between TECs and ES varies from locality to locality.

It is also sometimes difficult to identify the direct link between labour market information and planning and provision. TEC labour market assessments affect the higher level strategic planning which is reflected in their Corporate Plans. The impact of such assessments on TECs' more detailed operational plans is sometimes less clear, however there are also many very clear examples of good practice.

But requiring TECs to approve further education colleges plans has resulted in more dialogue between TECs and colleges over the skill needs of the local labour market, and has had some impact on college plans.

A fair conclusion to reach is that for colleges, TECs and other agencies there are also wider economic and social objectives to meet, as well as needing to respond to identified skill needs. The demand for particular places from students and trainees is an important influence on provision and, although planning arrangements are often geared towards addressing labour market and skills needs, funding arrangements are not always designed with the aim of influencing the skill or subject composition of provision directly.

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Any shortcomings in analysis; through data problems, mechanisms or personnel for carrying out analysis or the impact of the findings, is currently being considered through a Review of needs and practice.

With all this in mind then, before undertaking analysis at any level, we encourage the people doing the work to consider some important questions including:

- what is the objective of the analysis and what questions are we trying to answer or what hypothesis are we trying to prove?
- what is the coverage of the analysis, in terms of geography, sectors, time etc.?
- what could, or should, be the impact of the analysis and how could we ensure we take action on the findings?
- is the analysis worth doing?

While these are all fundamental questions, it is particularly important that, to justify undertaking the analysis in the first place, we are sure from the beginning that we have some mechanism, or some tool, for the exploitation of the findings and an implementation of a response.

The rest of this paper will cover the sort of analysis undertaken at the **national** level. The purpose of such analysis is largely three-fold:

- to help support the development of (national) policy,
- to help support the implementation and evaluation of policy at the national level, in consultation with our partners,
- to influence planning and provision at the sub-national level by providing a backcloth for local analysis and, where appropriate, providing a template for the sort of analysis which could be undertaken, with some modification, at a different geographical level.

The national level analysis covers the following issues:

Changing Skills Demands

- A definition of skills and what we mean by skill demands, breaking skills down by:
    - Basic skills,
    - Key skills,
    - Vocational Skills,
    - Job Specific Skills,
    - It is possible to examine some changes to skill requirements by looking at the occupational structure of employment; given that our Standard Occupational Classification (SOC) is fairly, although not perfectly, hierarchical and broadly classifies jobs which require similar levels of skill together.

So we look at:

- Recent trends in the nature of employment:
  - structure (all these issues helping to determine a skill need),
  - where people work and how this is changing, especially by occupation,
  - projections (changing structure: not just concentrating on aggregate levels),
  - issue of recruitment flows, where all occupations, whether growing or declining, lose workers through retirement or for other reasons and therefore need a "replacement demand".

We also look at:

- flexibility of employment:
  - temporal flexibility (varying the hours or days worked),
  - numerical flexibility (through temporary contracts, agency staff),
  - functional flexibility (switching staff easily between different tasks),
  - flexibility of location (approaches such as teleworking or homeworking),
- tenure of employment,
- causes of changing skill requirements,
  - impact of new technology,
  - work re-organisation and new business systems,
  - increasing quality and customer focus,
  - new production systems,
- how skills are changing within occupations. There is much evidence to show that in many occupations skill requirements have both widened and increased in level,
- what implications these changes have for requirements for different levels of skill (basic, key, vocational and job specific).

Trends in Skills Supply

- Numbers,
- historic trend in the size and composition of the labour force, participation and activity rates and projections of same,
- quality,
- trends in, and levels of, qualifications in the workforce generally,
- participation in education and training immediately post 16,
- qualifications of young people,
- new qualification awards,
- pattern of initial education and training,
- pattern and level of continuing education and training,
- quality of specific skills e.g. basic literacy and numeracy, key.

- discussion of the issues, including initial conclusions on:
    - the match between the demand for skills and the pattern of education and training,
    - the match between the quality of skills demanded by employers and the quality of skills available in the workforce,
    - to what extent achieving current demand would meet the competitive potential of the UK economy.
- numerical skill shortages: recruitment difficulties; where employers say they are having problems recruiting staff:
    - current proportion of employers facing difficulties, from various surveys,
    - recent trends and what we expect may happen in the future,
    - an evaluation of current levels; how badly we are faring at the moment compared to similar previous points in the economic cycle,
    - what we know about where specific problems are occurring, including specific sectors, occupations, regions or size of firms,
    - explanations being more than just shortage of skills and sometimes reflecting pay or conditions.
- qualitative ("suppressed") skill shortages:
    - employer satisfaction with the skill levels of their existing employees,
    - employer perception of the skills of applicants, recruits and people leaving education and training,
    - occupational qualification levels compared to "required" National Vocational Qualification levels and a comparison of qualification levels with the National Education and Training Targets,
    - specific skills: e.g. basic skills compared to employer needs, especially young people,
    - skills and qualification levels compared to our international competitors.

It is important that, throughout, this analysis is based on a wide range of sources and draws on a wide range of factors. It is also essential that it does not push data to the limit. We recognise the weaknesses of a manpower planning approach, the problems of matching qualifications to occupations and the problems of defining a geographical labour market.

Also, given that the result of such analysis is often some very general conclusions, there is a more fundamental question about the value of anticipating broad areas of need.

However this sort of analysis is an important influence on overall policy development and discussions on planning and provision at the national level. It is also essential background to those locally and sectorally carrying out their own analysis. At these levels, analysis is likely to be more-specific, be based on a greater understanding of the specific characteristics of that labour market and more-closely linked to the potential response mechanism.

Fig. 1:

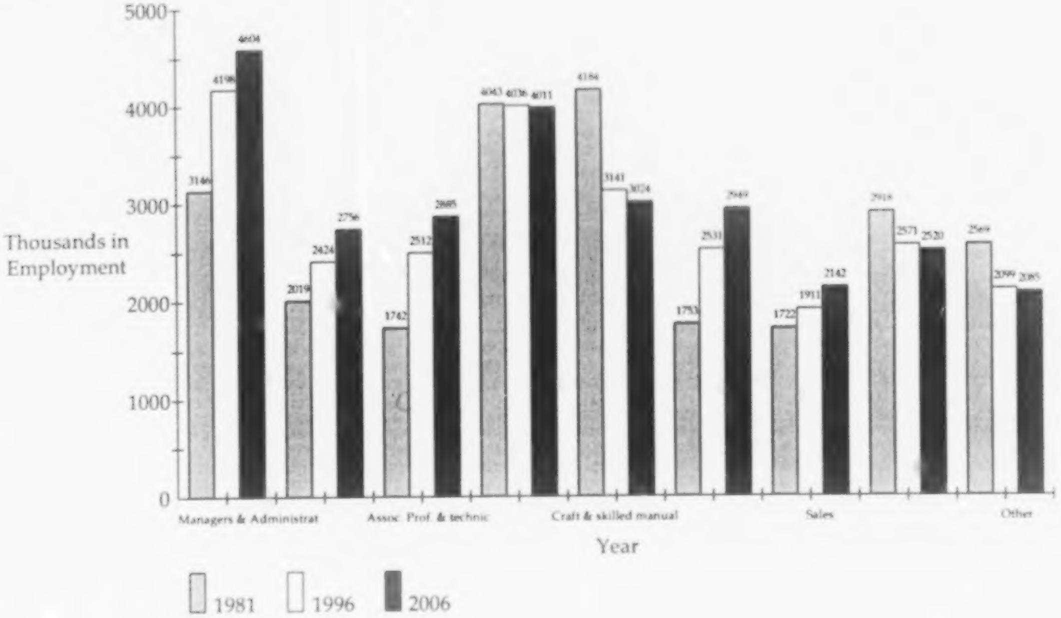
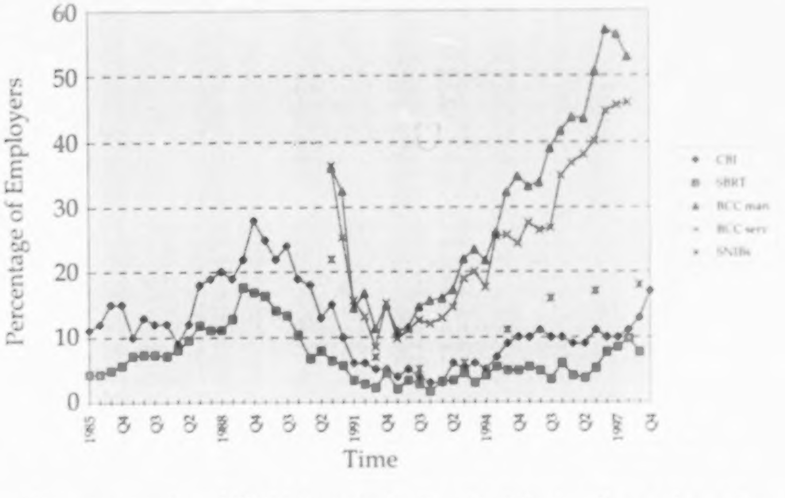


Fig. 2: ***SKILL COMPOSITION; SKILL SHORTAGES SINCE 1985***



CBI - % of employers expecting skilled labour to limit output during the next quarter.

SBRT - % of employers saying that a lack of skilled labour was their main problem.

BCC - % of employers experiencing recruitment difficulties.

SNIBs - % of employers with current hard-to-fill vacancies.

Fig. 3: ***EMPLOYEES AND SELF-EMPLOYED BY OCCUPATION, UK, 1996***

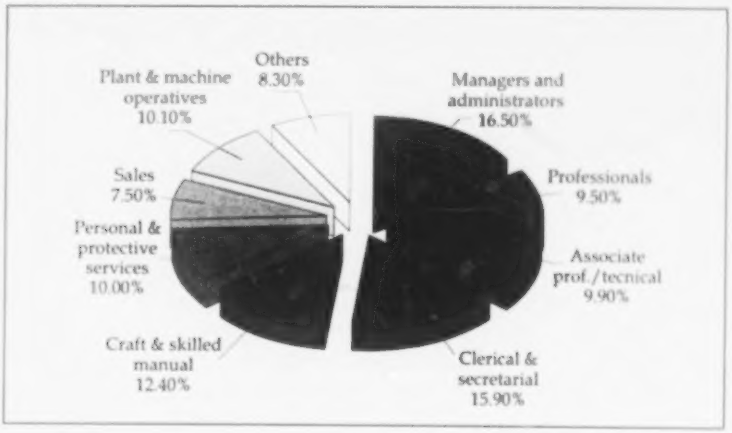
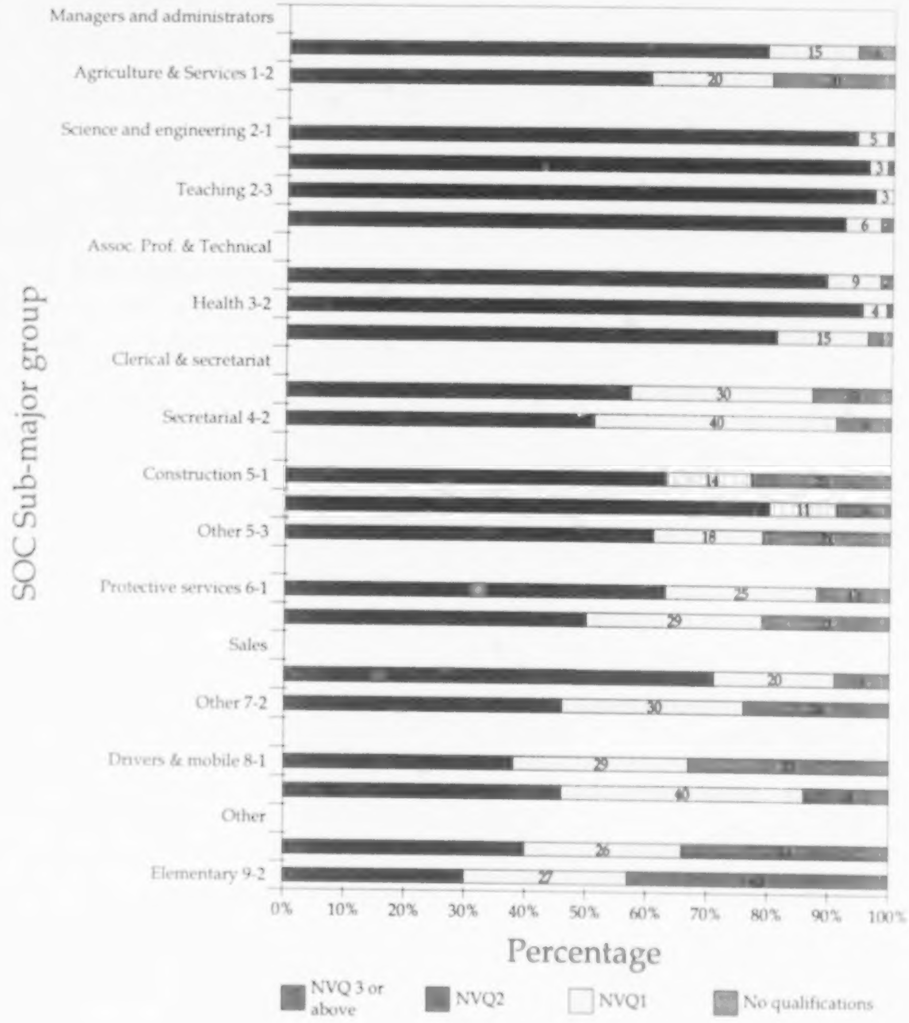


Fig. 4: ***EMPLOYEES AND SELF-EMPLOYED: HIGHEST QUALIFICATIONS OBTEINED BY OCCUPATIN***



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PART III

Discussion Papers

The identification of relevant labour market information for vocational education and training a user oriented approach

(Frans Meijers)

Introduction

The answer to the question of which labour market information is relevant for vocational education and training (VET), is determined by the socio-economic and political context in which the VET system is functioning. Nowadays, all European societies are experiencing a fundamental transition from a rather stable socio-economic and, therefore, political situation to a much more turbulent (and unpredictable) one. This transition can be characterised as a transformation of industrial and primarily nation oriented societies into post-industrial and internationally oriented societies. In industrial societies VET systems have different functions to those in post industrial societies. In this paper it is argued that in an industrial society , a VET system can develop in relative isolation from the actual labour market because of full employment and the stability of the job structure. Consequently , a content-oriented approach emerges in which the qualification demands of the labour market can be translated into rather abstract and theoretical knowledge. In this situation the actual functioning of the schools can be described as an exchange of knowledge for discipline (see Willis 1977). In a post-industrial situation, however, a content-oriented approach is inadequate because of the qualitative and quantitative discrepancies between demand and supply in the labour market, caused by rapid economic and social changes. A different perspective is required , in which not knowledge as such, but competencies become the pivot on which everything turns. To be able to equip students with these competencies, the VET system must change from an institution in which knowledge is *transferred by teachers* to an institution in which knowledge is *transformed by students.*

In an industrial society, the VET system can be managed differently than in a post-industrial society . In an industrial society it can be assumed, that since socio-economic and political relations are stable, the VET system does not have to change in a qualitative way but only has to adapt quantitatively to the changing demand for skilled employees. This can be understood better in the context of a management system that is organised top-down (see Mintzberg's machine bureaucracy) and is 'steered' pre-dominantly by financial objectives . In a post-industrial situation, however, a top-down management model proves to be inadequate because (a) it creates too great a distance between the schools and the labour market and (b) it is too rigid. In this situation, new management models have to be developed in which co-makership is central.

The above makes clear that in an industrial society the need for labour market information differs remarkably from that of a post-industrial society. In the former there is little need for such information, simply because the economic situation (and especially the job structure) is very stable. In the latter , the need for labour market information is enormous because (a) the demand for skills/qualifications changes fundamentally; (b) the demand for skills/qualifications changes constantly, and (c) as a result of these changes the VET system has to be managed more flexibly.

This paper has three sections. In the first we will elaborate on the need for labour market information in an industrial society. As mentioned above, until recently all European societies could be characterised as industrial societies (from a sociological point of view a planned economy does not differ a lot from a stable market economy). The problems that are experienced today in defining which types of labour market information are relevant and in to determine how to gather this information cannot be understood correctly without knowledge of Europe's recent history.

In the second section we will discuss the various attempts to make the VET system more flexible and the consequences of greater flexibility for the information needed at different management levels. The main conclusion is that the 'old' qualification model that emerged in the industrial society is still used. This model, however, is not flexible enough to meet the need for much more personality-based qualifications in a post-industrial society. In the third section , we will discuss the outline of a new model and its implications for labour market information.

1. *VET in an industrial society*

In the industrial society there was little doubt about the relationship between education, work and the labour market: In education one acquired the knowledge and skills required for an occupation. This concerned professional knowledge and skills in a narrow sense: the so--called 'process dependent' qualifications. The professional knowledge and skills could be easily transferred -- since the occupational structure hardly changed, in a qualitative sense (i.e. the type of subjects required), for a long time. The educational system was dominated by what could be called the exchange of knowledge for discipline approach . The school, or rather the teachers possessed knowledge, which they kept a secret, from pupils who did not show the correct behaviour and the right attitude. Pupils above all were expected to be obedient, and to adjust to both the requirements of the school and those of the subject matter. When the pupils conformed the teachers were willing to disclose their knowledge. The pupils were willing to conform since the knowledge that the teachers possessed was useful to them and the more knowledge) they possessed (i.e. the higher the diploma), the higher they could climb the social ladder. One of the important preconditions for economic growth in countries in transition is the reform of the vocational education and training system. However the various activities undertaken in these countries, both by the state and by educational institutions, directed towards this aim are confronted with financial, legal, and conceptual difficulties.

As mentioned above, there a is large degree of stability with respect to the occupational structure in the industrial society. Gradually new functions were created after the first industrial revolution in the late 18th century that were steadily 'condensed' into occupations. These occupations in their turn differentiated in the course of the subsequent decades; new functions splintered off from older occupations and finally became new occupations in themselves. Employees worked in a labour environment that had been organised to conform to the principles of 'Taylorism'. Briefly Taylorism is an organisation of the labour process in which the management has as much control as possible and the workers as little as possible. The key concepts are distribution of labour and specialisation. The manufacturing process is divided into tasks that are sufficiently small to be carried out by one worker. The best known example of this is the conveyor belt system where employees (to exaggerate slightly) are only responsible for screwing in one screw. The final result of a labour process fragmented in this way is a labour organisation in which every employee fulfils his work tasks within narrow limitations and under direct supervision: the so--called machine bureaucracy (Mintzberg 1983).

The consequence of this system was that the vocational education and training was also very stable. Once the goals (i.e. the range and level of qualifications) had been established, an educational training system only had to 'go along' with the continuous differentiation in occupations. And for this almost always differentiating oneself more and more was sufficient, which gave the system of vocational education and training full opportunity to be directed 'inward' (i.e. towards their own organisation). Like the rest of the educational system, the vet schools developed into a sort of pedagogical reserve (for a Dutch example see Meijers 1988). Finally this resulted in a rather non transparent vocational and professional training system at the secondary and tertiary levels, that was ill adjusted to the demand for different individual qualifications that was slowly developing from 1970 onwards.

There was a widespread belief that the VET system did in fact cater for the labour market i.e. for actual occupations and/or jobs. The functions and functioning of the VET system was, therefore, based on simple qualification model in which qualifications were central. But did the VET system meet the actual needs of the labour market in the industrial society? There is a lot of empirical evidence to suggest that the relationship between the VET system and the labour market was as bad in the fifties and sixties, as it was in the seventies, eighties and now. Since the schools concentrated on (the transmission of) abstract and theoretical knowledge, most of those who left school with a diploma didn't possess the right qualifications (see Rotman 1987 who showed that on-the-job training was much more important than formal training in acquiring the necessary skills; see also Rounds 1988). But the widespread belief in the qualifying power of the VET system was not challenged for two reasons. Firstly, because there was full employment, which meant that everyone could get a job. Secondly, because —at least until 1970— there was steady economic growth which made it possible for labour organisations themselves to invest in on-the-job training.

In such a situation, there was almost no need for labour market information. There were no fundamental changes in the occupational structure and consequently in the qualification structure. There was, at the same time, no need to assess the performance of the VET system because labour organisations had sufficient financial resources to invest in training themselves. Consequently the central government could restrict itself to what is later called a 'distributive policy'. It could, in other words, restrict itself for decades to financing 'more of the same'. The most appropriate form of management for this task is the bureaucracy in which everything is prescribed top-down. Authorities at a lower level (especially the school boards and school management) had no power at all: they had simply to execute what was directed from above. The only information they needed was detailed information about the examination procedures and the amount of knowledge that had to be transmitted. Labour market information was irrelevant, mainly because everyone assumed as a self-evident fact that the VET system performed adequately.

2. *VET in a post industrial society*

From the mid-1970s in Western Europe and from the 1990s in Eastern Europe ,labour organisations — owing to increasing and far-reaching automatisation and fiercer international competition — have been confronted with the need to drastically change the way in which they organise the work processes. This not only involves adjustments in a technical and/or functional sense; but also a change of attitude ('towards a learning organisation') and a redefinition of the meaning of a companies success . In figure 1 the most important changes are summarised. Companies could afford to use a simple strategy in which producing and marketing were central. Nowadays, they have to emphasise rapid response to fluctuating demand, mostly because the market has become unstable. Success used to depend on producing and selling as many 'goods' as possible, in order to maximise profit. Nowadays, companies can not define success in terms of profit only; they have to define it in non material terms too (for example as an increase in the 'knowledge capital' of the company). Recently as the president of Shell admitted - in reaction to severe criticism from environmental groups — that they have to become a 'green company' and act accordingly . Only then can the company's material goals be realised in the long run. It is precisely because business strategies and standards for success are no longer unambiguous that the structure of an organisation. have changed as well. Where in the industrial society the top-down organisation or 'machine-bureaucracy' predominated, we now increasingly find a more informal and horizontal type of organisation that promotes self-standing business units. In the industrial organisation jobs and functions were the building units; but in the modern business organisation work is organised around processes and projects and the emphasis is no longer on functional concentration but on functional integration.

Fig. 1: *THE TRANSITION FROM AN INDUSTRIAL TO A POST-INDUSTRIAL ERA*

	Industrial era	Post-industrial era
Strategy	producing and marketing	sensing and responding
Measure for success	profit maximisation	multiple
Structure	pyramid	campsite
Management style	top down	bottom up
Processing technology	labour intensive	knowledge intensive
Construction unit	jobs/functions	processes/projects
Structuring principle	functional concentration	functional integration
Form of employment	employee	labour entrepreneur
Talent development	centrally co-ordinated	between self care and collective care

Source Van der Zee, H (1996:204)

One of the consequences is that production processes has become more knowledge-intensive and consequently more dependent on knowledge (and therefore also on communication). In order to survive every company is continuously faced with the contradiction between operating in a sufficiently flexible way (the production side of the organisation) and at the same time preserving the motivation of the employees (the social side of the organisation).

The solution to this conflict is the development of an educational/training policy for all employees. The purpose of this policy is to enable employees to handle the issue *of uncertainty*, that is inherent to some extent in modern production processes, in a creative and responsible manner. This means above all that apart from the possession of so--called process--dependent qualifications (the traditional professional skills) to an increasing degree also the possession of process--independent qualifications (a sense of responsibility, communicational competence etc.) becomes essential for the adequate job performance. This means that the traditional facilities for vocational training and education will have to be transformed into institutions where continuous qualification processes become possible. This implies (as figure 2 illustrates) more than the preparation of mission statements in which stress tailor--made courses. Modern production processes require more and more professional skills that can not be transferred top--down.

Fig. 2: SHIFTS IN THE PROFESSIONAL QUALIFICATION

From:	To:
education and training	processes of qualification
labour market	qualification market
labour division	qualification balance
technical training	socio--technical training
dependence	reserve capacity
limiting of skills	integration of skills
expertise structure	expertise dynamics
fragmentation	merger and integration
stable systems	incremental innovation
on--the job training	learning on--the job
leave for training	time for training

Source: Nieuwenhuis & Onstenk (1994: 199)

A new management system

In order to create a modern system of vocational education and training that meets the changing needs of both employers and students, a new management concept has been introduced that can been characterised by the concepts 'decentralisation', 'deregulation' and 'increased autonomy on the part of the schools'. After some experimentation in all the Western European countries with this new type of management, three new control mechanism have begun to emerge:

a) a policy of contract partnerships aimed at establishing terms of reference. This means that the central authorities establish the overall political aims/goals (the terms of reference) and that executive bodies (in the first instance local/regional authorities) are made responsible for the actual implementation. Implementation implies that local/regional authorities establish contract partnerships with schools.

b) budgets are mainly financed on the basis of their output and not —as previously - on their input.

c) differentiated financing for performance. Schools are receiving a basic budget (roughly. one-third of their total budget) to maintain an infra-structure that is essential to maintain a certain level of quality. The rest has to been earned on the basis of well-defined output.

This means that the 'old' management model in which everything was prescribed top down by a central authority (mostly by the Department of Education) is abandoned in favour of a more complex model. The basis of this model is co-operation on four levels: (a) between the educational system and the social partners, (b) between the central authorities and schools, (c) between the regional/local authorities and schools, and (d) between the central and the regional/local authorities. In order to realise these four forms of co-makership, different kinds of information become essential. We will elaborate on this later. First, we have to look at the implications of this new management model for the schools.

Under the conditions described above, vocational education and training schools are increasingly being forced to switch their 'primary purpose' to local and/or regional educational and training needs. They cannot offer a fixed, standardised body of knowledge anymore, but have to develop in co-operation with local/regional employers 'tailor made' courses. Politicians assume as a more or less self-evident fact that it is possible to develop such courses which are - tailor-made both for employers and for students. To be able to do so, schools have to meet five requirements. Firstly they have to be student-directed ,which can be realised by introducing greater flexibility in the courses offered, mostly through modularization. Secondly an educational offer has to be developed that consist of programs which enable students to compensate for deficiencies. Thirdly, schools have to differentiate their courses towards specific target groups. Fourthly a coherent framework has to be organised between the various learning routes in the vocational education and training system. Lastly a differentiated methodical-didactic approach has to be developed.

The national qualification structure

The task of preparing students for a knowledge-intensive economy is proving in practice, to be a rather paradoxical task (despite the self evident viewpoint of politicians) . The vocational education and training system is primarily based on a static labour market view, in which relatively stable occupations are central (i.e. the traditional qualification approach from the industrial era). At the same time, however, new employees have to be made aware that the period in which school knowledge is useful in a specific job is becoming shorter and shorter. To solve this paradox a national qualification structure should be developed;. a qualification structure that specifies the different qualification levels and makes explicit the relationship between the qualification levels and the levels of work. In most cases four different levels can be distinguished according to three criteria: The responsibility an employee has to bear, the complexity of the work and the amount of knowledge and skill which have to be applied in different situations (i.e.. the transfer of knowledge and skills).

Fig. 3: ***THE QUALIFICATION STRUCTURE***

Level of work	Level of education/training	Length
a. Simple executive work	pre-basic education/training	0.5-1 year
b. Executive work	basic education/training	2-3 years
c. Autonomous work	vocational education/training	2-4 years
d. Specialised work	specialised education/training	4-6 years

The basic qualification everyone ought to have, can be obtained at the second level of the qualification structure. A transparent qualification structure (like the British system of NVQ's) is assumed to strengthen the acceptance of education and training in the labour market. By accepting vocational education and training a the main route to specific occupations and jobs, it is assumed that employers will be willingly to invest in the education and training. From this perspective the transparency of the qualification structure is combined with flexibility of vocational courses: because of the existence of a transparent qualification structure relates not only to schools but also to other institutions and on-the-job-training which can lead to recognised certificates.

3. *Information requirements : a short term perspective*

The core of a qualification structure consists of the so-called attainment targets, which refer to specified targets, at certain level of abstraction, which the students, at each of the qualification levels, are expected to attain. Every branch of industry and services has to develop its own attainment targets. In the Netherlands the attainment targets have to meet seven requirements:

1. The targets must be based on broad, future-oriented occupational profiles which are recognised by the employers' organisations and the trade unions in that branch of industry or services.
2. The targets must be coherent and systematic.
3. The targets must take into account the increasing internationalisation of the economy.
4. The targets must be specific to one of the four qualification levels.
5. The targets must enable a student after completing education/training, to not only to work in a concrete job, but also to function in a broad sense in society (i.e.. civic competence) and to transfer to further education/training.
6. The 'weighting ' of the targets must be specified in terms of credit hours.
7. The targets must specify partial qualifications. It must be possible to combine partial qualifications irrespective of the branch of industry or services in which they were acquired.

As mentioned earlier, the basis of the new management model is co-makership on four levels: (a) between the educational system and the social partners; (b) between the central authorities and schools; (c) between regional/local employers and schools, and (d) between the central and regional/local authorities. In order to realise these four forms of co-makership, different kinds of information become essential.

Co-makership between the educational system and the social partners

In order to ensure effective co-makership between the educational system and the social partners, at a national level the following information is required:

1. the effects of technological and organisational processes in the different branches of industry and services on the occupational or job-specific (the process dependent) and the problem-solving (the process independent) qualifications employees need.
   This information can be gathered by installing for every branch of industry and services a committee in which employers, trade unions and educationalists co-operate. The main task of these committees would be to describe the relevant technological and organisational changes that will occur in the near future and to translate these changes into concrete qualifications (i.e. attainment targets).
   The collection of qualitative information on technological and organisational developments in the different branches of industry and services that can be used to keep the VET system updated is, however, not as easy as it seems at first glance. The problem is, firstly, that these developments are only to a certain degree predictable, even for those who are directly involved (the social partners). What is possible, in a technological sense, will not be realised automatically; the realisation of technological changes depend to a large degree on non-technological factors like the intensity of competition, the costs of labour, the availability of skilled labour, organisational culture etc. The way labour can be organised depends to a large extent on exactly the same factors. the second problem, employers tend to keep as many options open as possible by demanding very high attainment targets, which lead to the demand for very abstract and general qualifications. Lifelong learning, flexibility and employability are the concepts behind which the employers' fear of being left behind in international competition is hidden. Trade unions share the same fear or, at least, are unable to formulate a view on the future that can compete with that of the employers. The problem, then, becomes one of demotivation of the young who want to obtain qualifications or a concrete job but instead receive a general education/ training which is not directly relevant to the labour market. To prevent the VET system from becoming too 'general', it seems necessary to establish an independent body that controls the grade and relevance of the attainment targets formulated by the committees in which employers, in every branch of industry and services ,trade unions and educationalists co-operate.

2. the possibility of developing a dual learning system (including placements) in co-operation with employers.
   This information can be produced by investigating the financial and organisational barriers and by undertaking pilot projects. The main problem here is that time and again dual learning systems prove to be very dependent on economic factors that cannot be predicted. During periods of economic recession employers are unwillingly to invest in apprenticeships and therefore try to shift the responsibility for education and training to the national and/or regional government. Consequently information is needed about medium and long term economic growth in every branch of industry and services, in order to develop a fiscal policy that balances 'push and pull' factors.

Co-makership between central authorities and schools

Decentralisation and deregulation has transferred responsibility for the quality of training in the first instance to the schools. But this does not relieve the central government from the obligation to control the quality of the entire training process. The key word in the relation between the central government and the schools is quality control. In order to be able to fulfil this function, the central government (i.e. the Department of Education) needs information on:

1. the way schools organise skill training processes: information is thus needed about the way schools communicate with the social partners on a regional/local level;
2. the way schools evaluate these processes: namely the way schools handle the qualification structure; and
3. the way schools correct these processes: information is therefore needed on the way schools use information from the local/regional labour market in order to adjust the courses on offer.

Co-makership between regional/local employers and schools

In order for vocational training schools to be able to offer courses that meet the local/regional demand for qualified labour, information is needed on:

1. the regional developments in the different branches of industry and services and the effects these developments have on the demand for qualified labour. Especially important is the determination of the number of employees that will need some sort of continuing training that can be provided by the vocational education and training schools.
   This information can be produced by establishing local/regional committees in which local/regional employers and representatives of trade unions and schools deliberate on a regular basis. However, there is a serious possibility that the information produced by such committees will be distorted by the employers' fear of being 'left behind'. The above mentioned independent body that controls the grade of the attainment targets formulated by the committees (in which employers trade unions in every branch of industry and services and educationalists co-operate), proves to be valuable at this level, also.
2. the number of placements that can be realised in regional trade and industry.
   This information can be collected by visiting local/regional employers. It would seem appropriate to establish a regional or local body that gathers this information for all schools.

Co-makership between the central authorities and regional/local authorities

In order to address local/regional problems, the central authorities need to collate some regional 'key figures':

1. the number of students enrolled in the educational system;
2. the number of students that is expected to enter the different institutions of the educational system in the near future.
   This information can be produced by creating a system in which the regional/local flow of pupils/students from primary to different forms of secondary education is registered.

4. *The future: towards a knowledge society*

Since it became apparent in the 1970s in most Western European countries that severe quantitative and qualitative discrepancies existed between demand and supply of qualified labour, the VET system became more flexible (as described in section 2 and 3). Forms of co-makership are being realised at all levels. However, the 'old' qualification model that emerged in the industrial era still dominates. Central to this model is the assumption that the essential qualifications can be acquired without work experience . This assumption, however, can be seriously questioned.

According to -Drucker (1993) -among many others— industrial societies are being transformed into knowledge societies. 'In the knowledge society the educated person is society's emblem, society's symbol, society's standard-bearer. (..) If the feudal knight was the clearest embodiment of society in the early Middle Ages, and the "bourgeois" under capitalism, the educated person will represent society in the post-capitalist society in which knowledge has become the central resource. (..) The educated person faces new demands, new challenges, new responsibilities. Educated persons matter' (p.211).

In line with this vision, Watts (1993) stated recently that a structure emerges in which education and employment are to a large degree mutually dependent: 'One works to learn; one learns to work. They are symbiotic: they depend upon one another. Both are continuing processes. In the post-industrial world, a society that wishes to work must be a learning society.' As a consequence, the concept of 'career' is being redefined. Increasingly, a career cannot be defined as a structure; careers has become 'boundaryless' (Arthur 1994). Nowadays, a career has to be defined as a process which describes an individual's lifetime of learning and work. Individuals are becoming increasingly responsible for their own work allocation. In order to carry out this responsibility, they must acquire so-called actor's qualifications, which can be considered as a specification of Drucker's concept of an 'educated person'. Actor's qualifications, that resemble the 'process skills', mentioned by Kidd & Killeen (1992), are qualities which enable individuals to appear on the social stage as an actor. An actor is someone who is no longer mainly passive, that is in the grip of psycho-social forces exerting influence on them (see also Beckhard & Pritchard 1992; Hammer & Champy 1993; Hayes & Pisano 1994). To remain (or to get) on course in a turbulent and changing environment requires the processing of a large amount of information. This holds true not only for individuals (students and employees) but also for the labour organisations. Organisations have to become learning organisations because production processes are becoming increasingly knowledge-intensive and consequently knowledge constitutes the greatest source of power (Toffler 1990).

In the 'knowledge society' individuals have to find their own way in education and occupational life, without the unquestioned support of the traditional cultural and social forces. In work organisations it is now realised that employees at every functional level must possess special qualifications such as flexibility and creativity in order to respond to the changing situation (London 1993). The increasing job uncertainty forces all individuals to develop the capacity of creating their own identity and determining their an own direction in life (Wijers & Meijers 1996). Individualisation means, as Beck puts it (1994:15), that the biography of individuals "becomes a chosen biography, a 'do-it-yourself biography'". The realisation of a 'reflexive biography' (Giddens 1991) with respect to work, means that individuals not only must have specific job qualifications and career competencies at their disposal (for example, the competency to apply for a job), but they must be able to give meaning to work.

It can be said that the problem of the alignment of education and employment is not so much (and perhaps: not primarily) a problem of (a lack of specific) knowledge, but more a problem of (a lack of) *identity* and *direction on the part of the employees.* In figure 4 this perspective is elaborated upon with regard to the concept of employability. In recent literature with respect to employability six dimensions are distinguished. For each of these dimensions research has shown that there is a 'human measure'. With a career identity and a feeling of direction, qualitative and quantitative flexibility can result in an increase in craftsmanship and loyalty. Without a career identity and a feeling of direction, these two aspects of employability can produce the opposite: i.e. an erosion of craftsmanship and loyalty (Kidd 1996).

Fig. 4: EMPLOYABILITY: RISKS AND CHANCES

Risks	Employability	Chances
eroding craftsmanship	qualitative flexibility	increase in craftsmanship
loyalty problems	quantitative flexibility	increase in loyalty because of growing insight
superficiality	functional mobility	increase in competence
social uprooting	geographical mobility	increase in exploring behaviour
reproductive learning	readiness to learn	constructive learning
conformism	readiness to change	creativity

Source Meijers (1996:20)

More and geographical and functional mobility can lead to an increase in competence and exploratory behaviour. However, without a feeling of identity and direction, it is very likely that the pressure to become more mobile will result in superficiality and social uprooting (Becker & Steele 1995). The same holds true for the need to learn and to change. Where the learners have a feeling of identity and direction, they will learn in a constructive manner and become creative. Without identity and direction they will learn only in a reproductive manner and become conformists (Argyris 1992).

5. *Information requirements : a long term perspective*

Confronted with a rapidly changing socio-economic environment, decision makers in the educational sector and in the field of the employment services tend to fall back on a view which I emphasises entry-requirements in terms of technical qualifications (i.e. a national qualification system). This approach, however, is not very efficient in bridging the gap between education and the labour market in the long run because: (a) qualifications change so rapidly that descriptions of qualifications are obsolete the moment they are published, (b) technical qualifications become less and less important and the importance of 'personality qualifications' (i.e. identity and direction) steadily grows (although they still have only little influence on the actual format of vocational education and training systems compared to the technical qualifications); and (c) technical information about entry qualifications does not enable students/job seekers to develop a career identity.

Therefore a new perspective has to be developed. Central to this perspective is the development of a career identity (the 'empowerment' of students/work seekers). The recent debate on 'career learning' provides the material to develop such a view (see Watts *et al.* 1996 for an overview). The central point of this debate is the fact that society as a whole and the educational system in particular offer a one-dimensional picture of work. Within the educational system, work is treated as a bundle of qualification requirements and not as an activity that is carried out to satisfy the essential needs of society as a whole and to realise the values underlying those essential needs. The increasing tendency to regard work in this way is largely due to discussions about the national qualification structure. Consequently , pupils are not given the opportunity to discover their own `life theme' and on the basis of that theme to formulate their own offer of work. Van Maanen (1977, p.37) defines a theme as "a discovered pattern by which people link the activities in their experienced past and expected future together. (...) A theme refers to an actor's notion of where he is going regarding his organisational career." The life theme reflects the central values and consequently also the central needs of an individual. Through his/her theme, an individual can define him/herself as someone who is concerned about the wider public or social `necessities of life', interested in that issue and willingness (and ability) to make a contribution to it. If work was presented in terms of fulfilling essential needs it would become possible for an individual to establish a link between his/her own life theme and the world of work and thus (s)he could also develop commitments relating to work.

To enable pupils to form an opinion about whether and how they themselves might make a valuable contribution to the labour market in their own career preference, it is necessary that they should be informed about the effect of the three debates on the demand for labour within their career choice. Relevant in this context are the so-called `key problems' of a particular career (Lave & Wenger 1991; Engeström 1991 and 1996). Key problems result from imperfections in the adjustment of the three debates (the `what', `why' and `how') to each other and from the shortcomings in the definition of a particular task. They cause the worker in his/her daily work to be confronted with problems of choice for which there is (as yet) no unambiguous solution. The confrontation with a key problem forces the individual not only to familiarise him or herself with the scientific, political and economic determinants of the process of change in the career of his/her choice but also explicitly to formulate his/her own values and norms on the subject and to take up a position with regard to the relevant discussions of the moment. The latter, by the way, is also a central element of education for citizenship.

If the problem of the alignment of education and employment is not primarily seen as a shortage of occupational knowledge, but as a problem related to a lack of career identity and direction, information about the labour market, which enables students to develop a career identity and a sense of direction, is needed. What is required, then, is information about:

a) the relevant developments in science and technology which influence the work processes and labour organisation in the different sectors of trade and industry ('What will be possible?');

b) the relevant socio-political developments which influence the work processes and labour organisation in the different sectors of trade and industry ('What will be seen as desirable?');

c) the relevant economic developments in which influence the work processes and labour organisation in the different sectors of trade and industry ('What are the means to realise what is possible and desirable?').

In principle, this information can be gathered at a national level by the same committees of employers, trade unions and schools, which collect the information on technological and organisational changes in the different branches of industry and services. They, however, cannot construct — on the basis of this information — the key problems (or professional/occupational dilemmas) which have to be the 'guiding principles' in vocational education and training in the near future. It seems appropriate that for this activity in every branch of industry and services special committees should be established consisting of

a) experienced craftsmen/workers, who know from their own experience the core dilemmas of everyday life;

b) experienced teachers, who are trained in experiential learning techniques;

c) some experienced employers, who have a broad overview with respect to the scientific, technical, socio-political and economical developments in their branch of industry or services; and

d) some independent experts, who have the same broad overview.

At a local/regional level, schools have to implement the information about core dilemmas/key problems with the help of experienced craftsmen and employers from local/regional companies.

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Labour market forecasts on behalf of the vocational education and training system

(Andries de Grip)

1. *Introduction*

The great diversity of types of education and occupational groups constitutes a complex matching problem in the labour market. In the former centrally planned economies, there was an inherent close link between the systems of production and training. This close link made it possible for information on skill demand and supply to flow between the production system and the vocational education and training (VET) system. The abolition of the centrally planned economies has made it necessary to re-establish the links between the VET system and the labour market within the framework of a market economy. It is particularly important to increase the transparency of the labour market for all actors involved: students, educational decision-makers, workers, employers and employment services.

It is obvious that greater transparency is highly relevant, both in a situation of excess supply and in a situation of excess demand. If labour market prospects for school-leavers from particular courses are poor, it is very important to make use of such information when individuals are choosing these study paths, as it indicates that only those who are highly talented and motivated will have fewer difficulties in finding a suitable job after finishing school. In that case it will be relatively easy for firms to recruit adequately skilled workers. On the other hand, in case of excess demand for a particular type of education it will be relatively easy for school-leavers to find suitable jobs and instead firms will face difficulties in recruiting newcomers with this educational background. This in turn could obstruct economic growth.

This paper will focus on the question of the kind of labour market information required in order to improve the transparency of the labour market and hence to re-establish the co-ordination between the labour market and the VET system in the former centrally planned economies of Central and Eastern Europe. First, Section 2 discusses the 'philosophy' of labour market forecasting in a market economy and the importance of labour market information for the various user groups. Section 3 deals with the relevance of forecasts instead of information on the current situation on the labour market. Section 4 discusses the general structure of a modular forecasting model with respect to labour demand and supply and the resulting skill demand and supply mismatches. Section 5 describes the data sources which are required for the various models of the labour market forecasting model and the relevant classifications. Section 6 will give an impression of the kind of information that could be generated by the forecasting model described. Section 7 gives the conclusions.

2. *The 'philosophy' of forecasting*

In the past, Western industrialised economies thought that the problem of co-ordination between the education system and the labour market could be solved by planning. One well-known approach is the 'manpower requirement model', as applied for example by Parnes (1962), who developed a manpower-planning model on the basis of the input-output structure of the economy. After a number of steps, the labour requirements in the various occupations and the educational qualifications demanded for these occupations are determined. The labour requirements are then compared with forecasts of the working population and the flow of graduates from the various types of training into the labour market.

However, during the recent decades the role of manpower forecasting has completely changed in the various countries where occupational and/or educational forecasts are still being made. Today, labour market forecasting is regarded as having two functions: a "policy function" and an "information function" (Van Eijs, 1994). The *policy function* refers to the usefulness of labour market forecasts as 'points of reference' or recommendations for policy makers taking decisions on educational investments or other educational or labour market policies (Wilson, 1994). The *information function* is primarily intended to assist in occupational or educational guidance, although it could also inform firms about possible future recruitment problems resulting from the scarcity of workers with a particular educational background.

Usefulness for various user groups

Both the policy function for decision-makers and the information function towards the actors on the supply and demand side of the labour market require a more transparent labour market, which adequately signals the chances and problems related to the mismatch between labour supply and demand. For this purpose, we need information on the expected developments of both labour demand and supply by occupational group and/or type of education and the resulting future labour market prospects.

However, a crucial point is to what extent the adaptation of the VET system to the requirements of the labour market should be effected either by policy makers or by the free choices for a particular study path of youngsters, the decisions of adults to participate in a particular course, or the decisions of firms to retrain their workforce. A distinction can be made here between the qualitative and the quantitative aspects of the mismatch between education and the labour market. As a matter of fact, the main role of educational decision makers - schools, ministries, et cetera - is to prevent qualitative mismatches between the skills learned in school and the skills required in the production process. This refers in particular to adequate curriculum planning. In a market economy, however, the actors on the supply side or the demand side of the labour market have, at the individual level, a major responsibility to prevent quantitative mismatches. They have to counteract excessive demand if they are buyers and excessive supply if they are sellers. Policy makers should facilitate this by generating the labour market information which is required for optimal individual decisions and by preventing required shifts in the educational choices of students from being hampered by a lack of educational capacity.

Youngsters benefit from adequate labour market information. The availability of good labour market information not only helps them to choose a study or occupation, but may also contribute to reducing the gap between their expectations and reality after graduation. It may result in a better allocation of students to the various types of education. Fewer may then choose certain courses because they have an over optimistic idea of the opportunities offered in the labour market, and fewer may mistakenly avoid courses of further education because they wrongly think those courses have unfavourable prospects. In a similar way, information on the labour market prospects for the various occupational groups and/or types of education is also highly relevant for career guidance and related decisions on participation in continuing training.

Firms and other organisations which are actors on the demand side of the labour market also have an interest in the availability of labour market information. These interests are in part already satisfied by improving the allocation of students between the various types of education and by making labour market data that gives a realistic picture of the labour market opportunities more readily available.

In addition, labour market forecasts provide 'early warnings' on future recruitment problems for firms, which can then use this information to anticipate human resources policies. Shifts in the relative scarcity of the various skill categories may imply that firms will not be able to recruit sufficient workers with the educational background required. These supply shortages may, accordingly, force them to restrict the level of production, if other alternatives such as the firm's workforce working overtime, are unable to solve the supply shortages. However, if firms anticipate future shortages, more 'preventive' policies would enable them to cope with such shortages. These preventive policies may involve additional training of the current workforce, policies that reduce the outflow to the labour market, external mobility of workers from other economic sectors, or creating training capacities which enable the firm to recruit workers who have not yet the required educational background.

However, this of course does not mean that, apart from providing adequate labour market information, educational policy-makers have no responsibility for the prevention of quantitative mismatches in the various segments of the labour market. Educational institutes, and perhaps even more their most important financier, the government, want the investment in education to produce a certain level of social return. Part of this return is that the awarded qualifications are useful in the labour market. Politicians will try to avoid spending money on a type of education which produces graduates who have difficulties in finding jobs and then not having enough money to expand those types of education with favourable labour market prospects.

Policy makers may in particular use the labour market information as a basis for various anticipatory VET policies such as investment decisions. With respect to capacity planning, it is important that the required shifts in students' educational choices are not hampered by a lack of educational capacity. But policy makers also have a role to play if the market fails. This may involve setting up training policies for the unemployed, initiated or facilitated by the (public) employment services or introducing a 'numerus clausus' for studies with an extreme supply excess.

In the Netherlands, the labour market information generated by the *Research Centre for Education and the Labour Market (ROA)* is used in particular for vocational guidance. *The National Careers Guidance Information Centre (LDC)* has incorporated the labour market data into various information products. For instance, ROA's labour market information is included in the public information products on CD-ROM in the *Traject* series, and in the book series *Beroep en werk* ('Occupation and work'). A separate product, custom-made to disseminate labour market information for guidance purposes, is the LDC publication *Kansen op werk 2000* ('Chances of finding employment in 2000').[33]

In the Netherlands forecasts are used following the same tradition as the occupational forecasts of the *Bureau of Labor Statistics* in the USA, which produces the well-known *Occupational Outlook Handbook* for guidance purposes (BLS, 1995). Regular occupational forecasts are also made by the *Institut für Arbeitsmarkt- und Berufsforschung (IAB)* in Germany, the *Institute for Employment Research (IER)* in the United Kingdom (IER, 1995) and the *Economic and Social Research Institute (ESRI)* in Ireland. The latter institutes in particular emphasise the usefulness of their forecasts for policy purposes[34]. More recently the Ministry of Education, Culture and Sciences in the Netherlands also decided to use the ROA forecasts for its evaluation of proposals from individual schools to start new vocational courses.

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[33] This booklet is also published in English and French: Education & vocational guidance and the labour market in Europe: The Netherlands, LDC-publications, Meppel, 1995 (L'orientation professionelle et le marché du travail en Europe: situation aux Pays-Bas).

[34] An overview of the work of these institutes is given in Hughes (1993) OECD (1994) Van Eijs (1994) and Heijke (1994).

3. *The relevance of monitoring and forecasts*

Monitoring

Information on the current situation in the labour market is highly relevant for adequate decision-making in VET policies. In particular the monitoring of the labour market position of school-leavers from the various studies is an important measure of what could be called the 'external' efficiency of the education system (Cf. ROA, 1997). In a similar way, the labour market position of those who participated in training courses that are part of 'active' labour market programmes should be monitored. Firstly, such surveys are an instrument for 'Quality Management' by individual schools, in particular with respect to curriculum development related to the developments in the occupational domains of the school-leavers and the related demand for continuing training. In addition they enable policy-makers to monitor the employability and various other aspects of the labour market situation of school-leavers for general or specific policy purposes.

The most important elements of monitoring the labour market position of the various types of education are probably the indicators of the current labour market situation, i.e.:

- the rate of unemployment;
- the extent of overeducation.

These two indicators make it possible to monitor the quantitative and qualitative imbalance on the labour market, respectively. As such, they are generally useful for monitoring purposes for VET policies, labour market policies and employers' recruitment policies.

Monitoring is also relevant for generating indicators on the more or less structural labour market risks of particular types of education. ROA has developed two 'risk indicators' which signal the employment risks of vocational studies that are usually not taken into account in manpower forecasting models, i.e.:

- the risk of an unexpected employment shock due to the concentration of jobs for workers with that educational background in a narrow occupational field or a particular economic sector;
- the instability of the employment situation of the workers with such an educational background as a result of business cycles.

These risk indicators are referred to as the *indicators of labour market flexibility* (occupational flexibility and sectoral flexibility) and the *indicator of the cyclical sensitivity of employment*[35]. The risk indicators do not pretend to forecast future changes in labour demand, but attempt to indicate the risks related to particular vocational studies as derived from past developments. However, in some sense these indicators also signal the degree of uncertainty of the labour market forecasts. Table 4 shows how these risk indicators can be combined with labour market forecasts in a qualitative typology of the labour market prospects of occupational groups and types of education for use in vocational and educational guidance. The labour market flexibility indicators are also relevant for curriculum evaluation and development, as they indicate the degree of specificity of the course. In this way, policy-makers may find out whether the broadening of a specific curriculum makes school-leavers more flexible on the labour market.

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[35] These indicators are described in Heijke, op cit., 1994, Chapter 3.

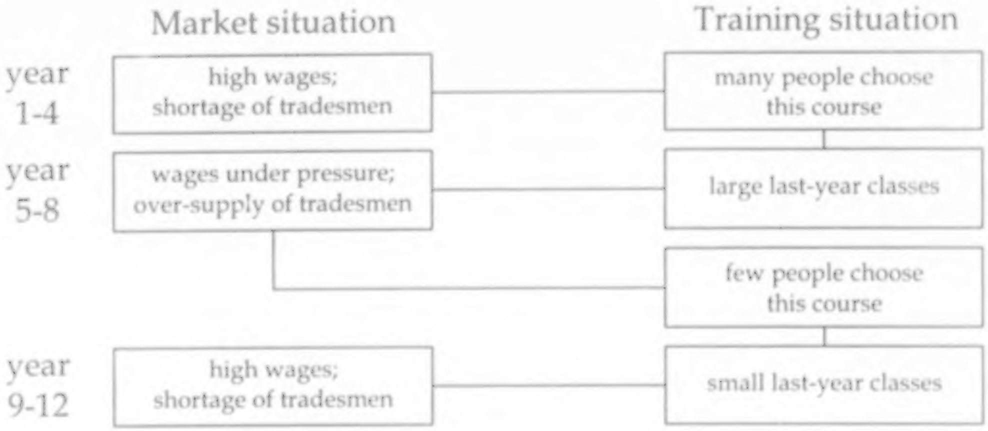
The same is true, of course, for retraining in the framework of labour market policy. An example of the use of these indicators for VET policies is how the relatively high indicator of occupational flexibility for technical studies (in the Netherlands) is used as an argument to stimulate student inflows into technical studies, the argument being that the flexibility is a strategic objective, whether there are be severe shortages of technically skilled workers or not.

For study choices, educational investment, anticipatory human resources policies and labour market policies, however, market transparency should explicitly refer to the future labour demand, supply developments and the resulting labour market perspectives for the various types of education. Students should not base their educational choices on the labour market situation at the time they make them, but on the labour market situation when they finish their studies and enter the labour market. If they base their choices on the current situation, so-called *cobweb cycles* will occur.

The cobweb cycle can be visualised in a highly stylised way by Figure 1. In the figure, the flow of time is from top to bottom. The left-hand blocks relate to successive situations in the labour market. The right-hand blocks refer to those in the pertinent education environment - in this figure a 4-year course for a skilled trade. The figure begins with a situation in which there is a shortage of tradespeople and, as a result, wages are high. This will entice many people to choose this particular course. At the end of the course, the final-year classes will be large and there will be large flows of graduates entering the labour market. If the demand for these tradespeople has not changed significantly in the meantime, there will be an oversupply of labour in that part of the labour market and wages will be subject to downward pressure. As a result, now only few people will choose this course. At the end of the 4-year training period, this will mean small classes of final-year students, and limited flows entering the labour market. The situation in the labour market thus returns to the one at the beginning of the cycle, with a shortage of tradespeople and high salaries.

The cobweb cycle described in the figure shows why periods with large over-supply of workers with a particular educational background can alternate with periods of large shortages of the same workers. It shows how feed-back from a labour market which is not in equilibrium can create adjustments in the form of increased or reduced participation in education which can lead to oscillations between too much and too little supply. These dynamic imbalances entail not only increased educational costs, as mentioned above, but also costs for social security benefits for the unemployed during periods of excess supply and loss of production during periods of shortages. Thus there are potential advantages for society if these cobweb cycle oscillations in the flows entering educational courses can be counteracted.

Fig. 1: COBWEB CYCLE IN A SUB-MARKET, FOR A 4-YEAR COURSE


Market situation
Training situation
year 1-4
high wages; shortage of tradesmen
many people choose this course
year 5-8
wages under pressure; over-supply of tradesmen
large last-year classes
few people choose this course
year 9-12
high wages; shortage of tradesmen
small last-year classes

Source: De Grip (1987)

This means that the labour market information required for educational choices in initial education should at least refer to medium-term labour market forecasts looking ahead about five years. As training courses in continuing training usually take less time, short-term forecasts for the next one or two years are probably more appropriate. For anticipatory human resources policies of firms, a combination of short-term and medium-term forecasts is probably preferable. Decisions on educational investments for starting new curricula, however, should probably be based on longer-term forecasts.

Long-term labour market forecasts, however, are usually less reliable than medium-term forecasts. This holds true in particular for the required forecasts for the labour market inflow of school-leavers and replacement demand, which can be relatively well forecast at the medium-term (Borghans et al., 1994). For this reason, the labour market forecasts should be limited to the medium term, i.e. a period of about five years. As mentioned before, a forecast period of five years is sufficiently long to produce the relevant labour market information for the actors on the labour market in general and students' choices in initial education in particular.

It is also important that the forecasts are updated regularly. Only if the forecasts are repeated annually or biannually with a moving forecasting period, will each cohort of students be provided with the required medium-term forecasts. A new forecast every other year has the advantage of keeping a finger on the pulse, while simultaneously leaving sufficient time to evaluate the observed differences between the forecasts and the actual developments on the labour market and to use these evaluations to improve the forecasting method. This evaluation is very important, as the differences between forecasts and actuals tend to increase over time. Waiting too long to make modifications will not only encourage bad decisions on training and education, but the visible mistakes in forecasting will also contribute to a negative image of the value of labour market forecasts.

For the actors at both the supply and the demand side of the labour market, the *signalling* value of the forecasts is most important. This means that detailed 'point forecasts' of labour supply and demand are not required. Instead, a *general characterisation* of the future labour market perspectives or the future recruitment problems by type of education could provide adequate signals for students and firms, respectively. Information intended as guidance for students can be limited to a qualitative description of the labour market perspectives by educational qualification on a scale from 'good' to 'poor'. For firms, the forecasts can be presented in terms of 'very large recruitment problems' to 'no recruitment problems'. The use of these qualitative descriptions will also prevent the quantitative forecasts being treated as more precise than is really the case.

4. *The forecasting model*

This section will discuss the general structure of a modular forecasting model with respect to both the demand and supply of labour and the resulting skill demand and supply mismatches. The most effective approach for generating labour market forecasts for the various occupational groups and educational qualifications is obviously a *modular* research model (Cf. De Grip et al., 1996). First, a modular approach makes it possible to set up the required labour market information step by step. Second, a modular approach facilitates the incorporation of the economic forecasts, demographic forecasts and students forecasts which already exist. Third, with a modular approach it is possible to make allowance for restrictions in the available data sources.

Figure 2 shows the general structure of the forecasting model that generates the required medium-term forecasts on both labour demand and supply and the resulting mismatches by type of education[36]. In its most elaborate form, a total of eight modules constitute the labour market information system. If all these modules are developed, the following *key information* could provide the labour market signals that are relevant for the intended user groups:

- the job openings by occupation;
- the future (mis)match between skill demand and supply and the related labour market prospects by educational qualification.

The information on the job openings by occupation is generated by the first three modules. Module I produces the *expansion demand by economic sector* (i.e. the expected employment growth). These employment forecasts should be based on a macro-economic model that differentiates between the various economic sectors in the national economy. In such a multi-sector model, which has been developed in several countries to generate the benchmarks required for general economic and employment policies, many interrelated financial and socio-economic variables influence the economic and employment forecasts.

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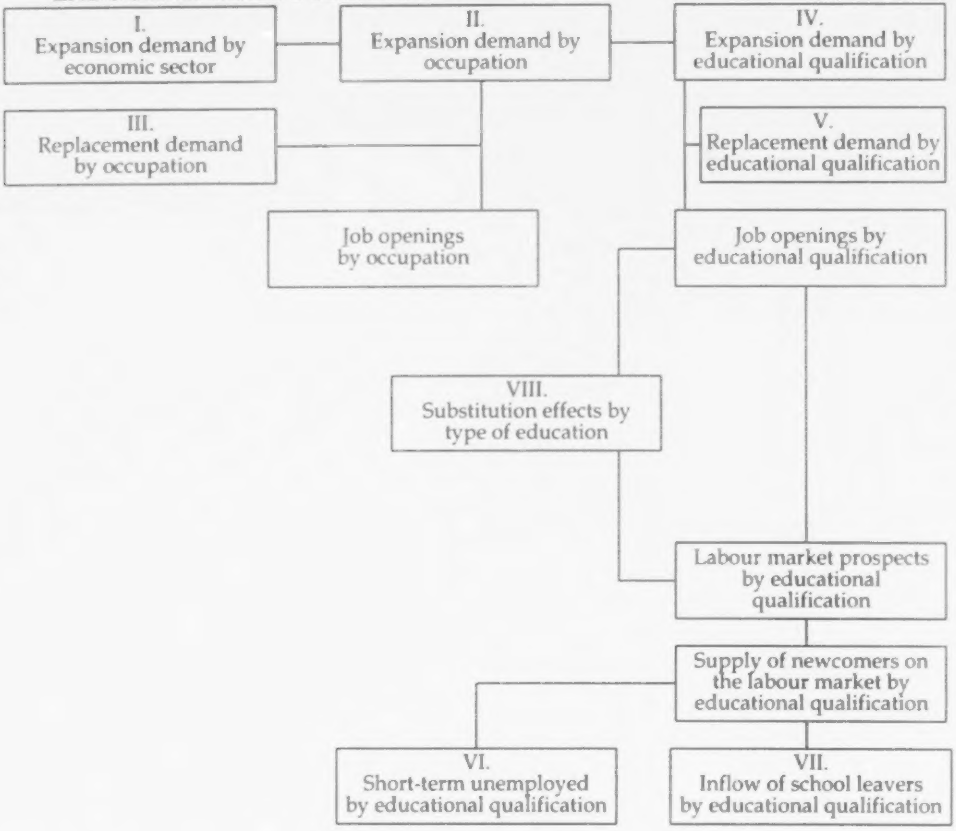
[36] The forecasting model is here formulated in terms of the information relevant for the actors on the supply side of the labour market (students) and VET policies. In a similar way, the model can be formulated in terms of the future labour recruitment problems of firms (See ROA, 1995).

Fig. 2: ***OVERALL STRUCTURE OF THE RESEARCH MODEL FOR MEDIUM-TERM LABOUR MARKET FORECASTS***


I.
Expansion demand by economic sector
II.
Expansion demand by occupation
IV.
Expansion demand by educational qualification
III.
Replacement demand by occupation
V.
Replacement demand by educational qualification
Job openings by occupation
Job openings by educational qualification
VIII.
Substitution effects by type of education
Labour market prospects by educational qualification
Supply of newcomers on the labour market by educational qualification
VI.
Short-term unemployed by educational qualification
VII.
Inflow of school leavers by educational qualification

Module II refers to the occupational model that transforms the employment forecasts by economic sector into the *expansion demand by occupation*. Since the occupational structure of an economic sector is mainly a reflection of the demand side of the labour market, changes in the occupational structure of employment could be explained by factors which primarily influence the demand for labour (e.g. capacity of production, labour productivity, hours per year worked, use of information technology and a trend term). The macro-economic models that constitute the basis of the employment forecasts in Module I generate the forecasts of all these explanatory variables, except for the growth of the use of information technology. The required historical data on the occupational structure of employment could be derived from the *occupation x economic sector matrix* of the working population, on the basis of the available Labour Force Surveys and/or Population Censuses.

Module III contains a model of the forecasts of *replacement demand by occupation*. In general for determining how many jobs will become available for new entrants on the labour market (see De Grip, Meyboom and Willems, 1993) the replacement demand due to the departure of workers is more important than changes in employment levels. The replacement demand results from both permanent withdrawals from the labour force, as workers reach retirement age or take early retirement, and temporary withdrawals, especially by married women caring for their children. The replacement demand is therefore closely related to the age structure and sexual composition of occupations and types of education. In forecasting the replacement demand, these two factors therefore play an important role.

The first step in modelling future replacement demand per occupational class is a description of the inflow and outflow patterns by occupational class over a certain period. However, there is hardly a country for which appropriate data on mobility flows on the labour market are available. For these countries there is a alternative approach based on stock data. By means of the so-called cohort components method, *cohort change rates* can be calculated on the basis of the number of persons of the same birth cohort who were employed at two different times. If we compare the workers employed in a particular age group cohort at two different times, the calculation of the net outflow is straightforward (see Willems and De Grip, 1993).

The second step in modelling is the translation of these inflow and outflow percentages into the replacement demand by occupational class. For occupational classes with an increase of employment, replacement demand is equal to the total net outflow in this period. For occupational classes which faced a decrease in employment, however, not all vacancies resulting from the outflow of workers will have been refilled. Replacement demand for these occupational classes therefore equals the number of vacancies that were actually refilled, that is, the total inflow of workers in the occupational class. This methodology measures only the *net* flow to or from an occupational class. This means that replacement demand satisfied by re-entering workers of the same age cohort is not measured.

The third step is to project the historically measured net replacement demand rates per age and sex group for a particular occupational class onto the age and sex structure of the workers at the beginning of the forecasting period. Moreover, the historically observed cohort change rates can be corrected for business cycle effects and for expected changes in participation rates. For more details see Willems and De Grip (1993). The required historical data for forecasting the replacement demand by occupation could be derived from the *occupation x age group x gender* matrices of the working population on the basis of the available Labour Force Surveys and/or Population Censuses.

Together, the first three modules make it possible to generate the key information on the *job openings by occupation*, which is of major importance for the intended user-group of the EURES labour market information.

Module IV is the first step in extending the labour market information to include information on types of education. In this module the forecasts of the expansion demand by occupation are transformed into the future *expansion demand by educational qualification*. In the model developed in Borghans and Heijke (1996) the distribution of the educational qualification per occupational segment is determined by the skill structure of this occupation in the most recent year for which observations are available. Moreover, the model allows for the upgrading or downgrading tendencies and concentration around the average training level for this occupation.

The required historical data on the educational structure of occupational employment could be derived from the *occupation x educational qualification matrix* of the working population on the basis of the available Labour Force Surveys and/or Population Censuses.

Module V generates the forecasts of *replacement demand by educational qualification*. Replacement demand by educational qualification has to be interpreted differently from replacement demand by occupational class, since net mobility between occupational classes must only be taken into account in the latter. When a worker with a certain educational background changes occupation, this does not create a vacancy on the labour market for a newcomer with the same educational background. Therefore this does not influence replacement demand for newcomers for the educational qualification in question.

There is another difference between the replacement demand by occupational class and educational qualification. If someone leaves a certain occupational class and is replaced by an employee with a different (*e.g.* higher) educational background, there is a replacement demand for the occupational class in question. When such displacement or substitution effects occur, however, there is no question of replacement demand for the type of education in question, but rather of an employment decrease for one type of education and an employment increase for the other.[37]

The modelling is similar to the cohort change rate modelling of the replacement demand described above (module III). The required historical data for forecasting the replacement demand by educational qualification could be derived from the *educational qualification x age-group x gender matrices* of the working population on the basis of the available Labour Force Surveys and/or Population Censuses.

Together, modules IV and V generate information on the future *job openings by educational qualification*. Although this is not the intended final information on the labour market by educational qualification, the information on the job openings by educational qualification is highly relevant for VET policies.

Module VI supplements the demand-side information on the future job openings by educational qualification with supply-side forecasts of the future labour market inflow of school-leavers. The forecasting model used should be based on a *transition matrix* based on the composition of full-time education and a classification of the population by level of education. Flow coefficients relate the `origin' of students in year *t* to the `destination' of these students in year *t+1*. By means of these flow coefficients, the future numbers of students coming from each educational category can, step by step, be forecast. However, such a straightforward approach would assume that the choices of students remain unchanged during the entire forecasting period. Therefore, the flow coefficients of students, which are affected to a great degree by choices and/or selection processes, are considered as the dynamic elements of the model. In general, future changes in these coefficients can be forecast by means of (modified) trend extrapolations. The required information can be derived from recorded data on students in initial education, combined with educational matrices that describe the student flows between the various types of initial education and data on the labour market inflow rates of school-leavers.

It is also necessary to forecast the flow from other forms of education (apprenticeships, recognised correspondence courses, training in medical care *etc.*) onto the labour market. Data about that category has to be taken from available additional statistics, or obtained directly from the training institutions concerned. Moreover, enrolment in such courses changes the qualification profile of `school-leavers'. For this reason, the number of students who have successfully completed such courses has to be proportionally subtracted from their preliminary standard educational groups. Another correction is needed to prevent students enrolling in several non-standard courses or in a standard and non-standard course of the same type being counted twice. In this way one can forecast the flow from both standard and non-standard educational groups onto the labour market.[38]

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[37] In principle the opposite also holds: if a worker who leaves a shrinking occupational class is not replaced, whereas someone with a similar educational background is recruited in another, growing occupational class, there is replacement demand by type of education but no replacement demand by occupation.

[38] See Berendsen et al. (1992) for detailed information about the method and the required data.

Module VII refers to the collection of recent data on the numbers of *short-term unemployed by educational background.* The short-term unemployed workers at the beginning of the forecasting period should be included in the modelling of the future labour market prospects as these workers compete on the labour market with school-leavers with the same type of education. The short-term unemployed and the inflow of school-leavers are combined in the forecast of the future *supply of newcomers on the labour market by educational qualification.* The requested data can be derived from existing registered data or unemployment surveys which include information on the educational qualifications of unemployed workers.

By matching the forecasts of job openings (labour demand) with the forecasts of labour supply, an indicator of the future labour market situation by educational qualification can be constructed. However, in forecasting the *labour market prospects by educational qualification*, the expected substitution effects between the various skill categories, where *ex ante* shortages or excess supply are forecast, should be taken into account. Module VIII deals with the 'ex post' *substitution effects* that may occur between the various types of education. It measures both the negative 'crowding-out' effect and the positive 'pull effect' for particular types of education due to the excess supply or supply shortages for competing educational qualifications.

5. *Required data sources*

As mentioned in Section 4, medium-term employment forecasts by economic sector constitute the starting-point of the expansion demand forecasts. In most countries, medium-term employment forecasts are made on a regular basis for general economic and labour market policies. In several countries, these forecasts are also dis-aggregated by economic sector, although the number of sectors distinguished differs between countries (Cf. De Grip et al., 1996).

Labour Force Surveys and/or Population Censuses are the major data sources for both the expansion demand and replacement demand forecasts for the various occupational groups and types of education. Since most economic sectors offer employment for a broad spectrum of occupations, it is important to determine which occupations will profit from the expected expansion demand within an economic sector. For this reason, the second step (Module II) translates expansion demand by economic sector into the *expansion demand by occupation*. The sum of the predicted employment growth for an occupation in all economic sectors yields the expected expansion demand for that particular occupation. In translating the employment forecasts by economic sector into employment forecasts by occupation, two components play an essential role: changes in the employment levels per economic sector ('the sectoral effect') and changes in the occupational structure of employment within each economic sector (the occupational effect).

In order to calculate the *expansion demand by occupation*, one has to have data on *sector x occupation matrices*, preferably over a period of several years. If analyses and forecasts are to be reliable, the number of workers in a particular occupation must not be too small. As a rule of thumb, we suggest that, in calculating *expansion demand by occupation*, the occupational categories to be distinguished should employ more than 5,000 persons at national level, as this is the level on which the forecasts of changes in the occupational shares in the various economic sectors are based. At the regional level, the occupations to be distinguished should employ more than 2,000 persons in order to provide a reliable basis on which the estimated national shifts in the occupational structure of employment in a particular economic sector can be projected. However, if the sample size of the labour force is rather small, higher thresholds with respect to the minimum number of workers are required.

In Module IV, expansion demand by occupation is translated into *expansion demand by educational qualification*. There is in general no single type of education which is uniquely appropriate for a particular occupation. The problem therefore arises that the demand for labour in a given occupation may be assigned to several educational qualifications, but only one person with one particular background can be hired to fill each job. In fact people with a particular educational qualification are generally in demand in several occupations, but are in competition for these occupations with workers with different educational backgrounds. This problem can be resolved by predicting the educational structure of occupations on the basis of their structure in the past. This requires a time series of *occupation x educational qualification* matrices. To produce reliable forecasts, we again formulate, as a rule of thumb, that the educational qualifications to be distinguished should employ more than 5,000 persons at the national level, and that at the regional level all the educational categories distinguished should employ more than 2,000 workers.

However, as mentioned in Section 4, *expansion demand* is not the only relevant component of demand. As pointed out before *replacement demand* (Modules III and V) is usually even more important, as this variable determines the vacant jobs due to the mobility between occupations and the flows out of the labour market.

The replacement demand forecasts will be based on the cohort change rates of the people working within each occupation. The *replacement demand by occupation* forecasts require an *occupation x sex x 5 years age group matrix* for at least two years. The *replacement demand by educational qualification* is calculated using the same method that was described for the replacement demand by occupation. These forecasts require a *type of education x sex x 5-year age group matrix* for at least two years.

The forecasts of *school-leavers by type of education* (Module VI) require data on the number of *students per type of education by school year and sex, transition matrices* on the *flows within initial education by sex*, and data on the *participation in additional training by type of education and initial educational qualification*.

The forecast of the number of school-leavers should be supplemented with the number of *short-term unemployed workers*, who will compete for the available jobs (Module VII). Only the short-term unemployed are important, since the knowledge and skills of people who have been unemployed for a very long time become more or less obsolete. It is important to know what kind of educational background the short-term unemployed have, as an indication of which school-leavers they will compete with. This module requires recent data on the *short-term unemployed by educational qualification*.

To provide adequate information for guidance purposes and other VET policies in particular, the *level of aggregation* of occupational groups and types of education distinguished in the available data sources is very important, as this also determines the occupational groups and types of education for which labour demand forecasts can be generated. However, in some cases data sources from other 'similar' countries can probably be used for further disaggregations. In this respect, the use of standard classifications is extremely important. In particular, the classifications used by EUROSTAT on economic sectors (NACE/CLIO), occupations (ISCO'88) and educational qualifications (ISCED) should be used as standard classifications or in order to make the various national classifications compatible. The 111 occupations distinguished at the 3-digit level in ISCO'88 are a suitable classification for the occupational groups for which forecasts of the number of job openings can be made. With respect to the classification of educational qualifications, ISCED allows to distinguish between 7 levels of education and 21 fields of study.

Table 1: DATA REQUIREMENTS FOR THE LABOUR MARKET FORECASTING MODEL

Output (Module)	Input (Required data)	Time series required (number of years)
Expansion demand by occupation	matrix occupation by economic sector	5-10
Expansion demand by educational qualification	occupation x educational qualification	5-10
Replacement demand by occupation	matrix occupation by sex and age group	2-10
Replacement demand by educational qualification	educational qualification by sex and age group	2-10
Supply of school-leavers	students by educational qualification by school year by sex	1-5
	transition matrix initial education by sex	1-5
	additional training by educational qualification by initial educational qualification	1-5
Short-term unemployment	short-term unemployed by educational qualification	1

The information generated

As an illustration of the kind of information that could be generated, a number of labour market forecasts for the Netherlands will be presented for several occupational groups and types of education[39]. In order to provide students who have to choose a particular study with appropriate labour market signals, the forecasts are combined with additional risk indicators on the cycle sensitivity of employment and the occupational flexibility for workers with a particular educational background.

Table 2 gives an overview of the forecasts for the selected occupational groups. The table shows that the expected job openings in the Netherlands range from 'very high' for programmers and system analysts to 'low' for plumbers. Table 3 illustrates the medium-term forecasts of the future labour market prospects for five types of education based on the supply/demand ratio indicated in Figure 1. The table shows that the expected labour demand forecasts range from 'good' for Intermediate Vocational Education (IVE) Medical Laboratory and Higher Vocational Education (HVE) Fine Arts to 'moderate' for the other three types of education.

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[39] More detailed information can be found in ROA, *The labour market by education and occupation to 2000*, ROA-R-1995/3E and the *Statistical Appendix*, ROA-R-1995/3BE, Maastricht, 1995. As mentioned before, the ROA forecasts are used in various information products for educational and career guidance by the National Careers Guidance Information Centre (LDC).

Table 2: ***EXPECTED JOB OPENINGS FOR SOME OCCUPATIONAL GROUPS (1995-2000)***

Occupational group	Total number	Annual average %	characterisation
Plumbers	7,100	3.3	Low
Shop assistants	90,300	6.4	high
Programmers and system analysts	97,500	12.6	very high
Primary education teachers	24,100	4.5	average
Higher electrical engineers	5,700	7.3	high

Source: ROA (1995)

Table 3: ***EXPECTED LABOUR MARKET PROSPECTS FOR SOME TYPES OF EDUCATION (1995-2000)***

Type of education	Supply demand ratio	characterisation*
PVE Textile and leather trades	1.03	moderate
IVE Mechanical engineering	1.06	moderate
IVE Medical laboratory	0.94	good
HVE Fine arts	0.91	good
UE Law	1.10	moderate

Source: ROA (1995)
** On a 5-points scale from poor to good*

Table 4 illustrates the resulting multi-dimensional typology in qualitative terms for the five selected occupational groups and types of education, in a form suitable for vocational guidance.

Table 4: QUALITATIVE TYPOLOGY OF LABOUR MARKET PROSPECTS OF SOME OCCUPATIONAL GROUPS AND TYPES OF EDUCATION, FOR USE IN VOCATIONAL AND EDUCATIONAL GUIDANCE

	Occupational groups
Plumbers	Few plumbers are expected to retire in the coming years, so that the demand for new entrants is expected to be low. Employment in this occupation is also very sensitive to fluctuations in the trade cycle.
Shop assistants	Over the next few years, the demand for new workers will be relatively high. The cycle sensitivity of employment is average, but the possibilities of switching to other economic sectors are limited.
Programmers and system analysts	Because the coming years will see the creation of very many new jobs for programmers and system analysts, and the replacement demand is on an average level, the demand for new entrants is expected to be very high. Employment in these occupations is well spread, so that it is not dependent on a specific business sector.
Primary education teachers	Over the next few years, the demand for new workers will be relatively low. The cycle sensitivity of employment is low, but the possibilities of switching to other economic sectors are also very limited.
High-level electrical engineers	Because many jobs for high-level electrical engineers will be created in the coming years, the demand for new entrants to this occupation is expected to be at an average level. Employment in this occupation is spread over many business sectors, so that it is not dependent on the development of a particular sector, but it is quite sensitive to business cycle fluctuation.
	Types of education
Preparatory Vocational Education, Textile and leather trades	The unemployment for 'Preparatory Vocational Education, Textile and leather trades' is at present rather high and many workers with this educational background find only jobs below their level of education. The labour market prospects for the coming years are moderate. Although the growth in employment is low, replacement demand causes the number of job openings to be at an average level. However, the flows of school-leavers entering the labour market exceeds labour demand. People with this educational background find work in diverse occupations and business sectors and are in that respect not very dependent on a particular occupation or sector.
Intermediate Vocational Education, Mechanical engineering	Unemployment for 'Intermediate Vocational Education, Mechanical engineering' is at present at an average level and the rate of overeducation is average. The expected labour market prospects are moderate. With this educational background, one is very flexible as graduates are able to do many different kinds of work. Employment is very well spread over both business sectors and occupations.
Intermediate Vocational Education, Medical laboratory	At the moment, unemployment for 'Intermediate Vocational Education, Medical laboratory' is at an average level. However, almost all workers find jobs at an appropriate level. Because of the very low flows leaving the education system, the labour market prospects for the next few years are expected to be good. Those with this education are however very dependent for employment on the health care sector and on the occupational class of pharmacy assistants, opticians and orthopaedists.
Higher Vocational Education, Fine arts	At the moment, unemployment for 'Higher Vocational Education, Fine arts' is very high, although almost all employment is in jobs at an appropriate level. However, the expected labour market prospects in the coming years can be characterised as good, because many new jobs will be created in the coming years. Although people with this educational background are fairly dependent on a restricted number of typical artistic professions, they have some opportunities of switching, for example to teaching in Secondary Education.
University Education, Law	At the moment, unemployment for 'University Education, Law' is at an average level. Moreover, the greater part of the employment is in jobs at an appropriate level. For the coming years, however, the labour market prospects are moderate, in particular because there is a high flow of graduates entering the market. Although many of these people are dependent for employment in occupations such as solicitors or judges, a reasonable number also find work outside of these specific legal occupations.

Source: ROA

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6. *Conclusions*

This paper focused on the question what kind of labour market information is required to improve the transparency of the labour market, which could provide a market-driven co-ordination between the labour market and the VET system in the previously centrally planned economies of Central and Eastern Europe. In the first part, the changing role of labour market forecasting in the Western world was discussed.

Nowadays labour market forecasting is considered to have two functions: a "policy function" and an "information function" (Van Eijs, 1994). The *policy function* refers to the usefulness of labour market forecasts as 'a point of reference' or recommendations for policy makers who have to take decisions on educational investments or other educational or labour market policies (Wilson, 1994). The *information function* is primarily intended as assistance in occupational or educational guidance, although it could also inform firms on possible future recruitment problems due to the scarcity of workers with a particular educational background. In a market economy, the actors on the labour market are active and passive subjects at the individual level i.e. if the suppliers create excessive supply they suffer under low wages or unemployment and vice versa if buyers create excessive demand they have to pay high salaries or are unable to fill vacancies.. Policy-makers should facilitate this by generating the labour market information which is required for optimal individual decisions and by preventing the required shifts in students' educational choices from being hampered by a lack of education capacity.

Youngsters may benefit from an adequate availability of labour market information when they choose a study or occupation. For trade and industry, it is important that there is a sufficiently large potential workforce to fill the available work places, and that the workers who are recruited have the specific knowledge and skills to enable them to achieve the highest possible productive performance. Moreover, labour market forecasts provide 'early warnings' of future recruitment problems for firms, which could use this information for anticipatory human resources policies. If firms anticipate future shortages, they may use 'preventive' policies to cope with such shortages. These preventive policies may involve additional training of the current workforce, policies which reduce the outflow of the labour market or the external mobility of workers to other economic sectors, or creating training capacity which enables the firm to recruit workers which do not yet have the required educational background. Policy-makers could in particular use the labour market information as a basis for various anticipatory VET policies such as educational investment decisions: the start of new studies, the increase or decrease of the capacity for existing studies. (This is a repetition of your introduction which is fine, but you should change the wording.)

Information on the current situation of the labour market is also highly relevant for adequate decision-making in VET policies. In particular the monitoring of the labour market position of school-leavers of the various studies and those who participated in active labour market policies, by means of annual surveys, is important for measuring the 'external' efficiency of the VET system. The rate of unemployment and the rate of overeducation are the two major indicators referring to the quantitative and the qualitative labour market mismatch, respectively. Moreover, so-called risk indicators make it possible to measure the more or less structural labour market position of the various types of education. The risk indicators should in particular refer to the labour market flexibility and the cyclical sensitivity of employment for graduates of the various studies.

For study choices, educational investment, anticipatory human resources policies and labour market policies, however, labour market transparency should explicitly refer to the future labour demand and supply developments, and the resulting labour market perspectives for the various types of education. Students should not base their educational choices on the labour market situation at the time they make their choices, but on the labour market situation as it will be when they finish their studies and enter the labour market. If they base their choices on the current situation, so-called *cobweb cycles* on the labour market will occur.

The most effective approach for generating labour market forecasts for the various occupational groups and educational qualifications is obviously a *modular* research model. First, a modular approach makes it possible to set up the required labour market information step by step. Second, a modular approach makes it possible to incorporate economic forecasts, demographic forecasts and student forecasts which already exist. Third, with a modular approach it is possible to make allowances for restrictions in the available data sources.

When all modules have been developed, the following *key information* can provide the labour market signals that are relevant for the intended user groups:

- the job openings by occupation;
- the future (mis)match between skill demand and supply and the related labour market prospects by educational qualification.

Medium-term employment forecasts by economic sector constitute the starting point of the expansion demand forecasts. In most countries, medium-term employment forecasts are made on a regular basis for general economic and labour market policies. Labour Force Surveys and/or Population Censuses are the major data sources for both the expansion demand and replacement demand forecasts for the various occupational groups and types of education. The forecasts of *school-leavers by type of education* require data on the number of *students per type of education by school year and sex, transition matrices* on the *flows within initial education by sex,* and data on the *participation in additional training by type of education and initial educational qualification*. The forecast of the number of school-leavers should be supplemented with the number of *short-term unemployed workers.*

To provide adequate information for guidance purposes and other VET policies, the *level of aggregation* of occupational groups and types of education distinguished in the available data sources is very important. In particular the classifications used by EUROSTAT on economic sectors (NACE/CLIO), occupations (ISCO'88) and educational qualifications (ISCED) should be used as standard classifications or as points of reference for national classifications which are compatible.

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Qualitative information for curriculum development
(Gisela Dybowski)

1. *Framework for curriculum development*

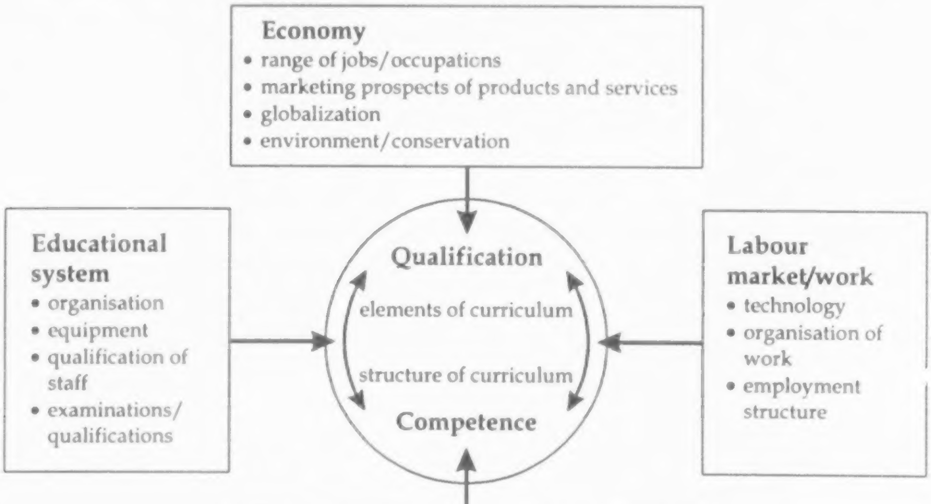
According to the encyclopaedia "the curriculum ... determines the teaching objectives, the organisation of and the methods according to which educational objectives of individual subjects are to be achieved" (Bertelsmann Universallexikon 1995). This is the official definition. In the view of experts, however, a curriculum is more than just that. In the international debate, the term "curriculum" does not only refer to the syllabus which describes training contents or subjects. In international usage the term 'curriculum' encompasses a complex learning process during which

- the target group,
- the target qualifications,
- the methods of education to achieve them

are developed, taking as a yardstick, the qualifications industry and society as a whole require at the workplaces.

A curriculum, as it is currently internationally understood, is a highly complex system of requirements and processes which cannot be reduced to just a syllabus. Instead, a curriculum must take into account the aims set by society and the economic conditions in the country, the specific qualifications in demand on the labour market and the structures and resources of education and training systems. This is the basis for developing the curriculum structure and elements as well as the course of training.

Fig. 1: *THE CONCRETE REQUIREMENTS REGARDING THE CONCEPTS FOR CURRICULUM DEVELOPMENT ARE SHOWN BELOW:*


Economy
• range of jobs/occupations
• marketing prospects of products and services
• globalization
• environment/conservation
Educational system
• organisation
• equipment
• qualification of staff
• examinations/ qualifications
Qualification
elements of curriculum
structure of curriculum
Competence
Labour market/work
• technology
• organisation of work
• employment structure
Society
• values
• dynamics of change
• industrial relations

Taking account of predefined structures and resources in the education and training system

Each country has is own educational tradition which is reflected in the structure of its education system. Curricula have to be adjusted to this overall structure. In specific areas, they may develop their own structures which then must be made compatible with the others in the country. If an education system has a mainly horizontal structure, the training structure defined by the curriculum must also be a horizontal, under certain circumstances with the provision that change-over be permitted in both directions. A vertical structure, on the other hand, may require a bloc-by-bloc module system.

Of course it has to take into account the existing educational and training institutions (school, companies, training centres etc.), their resources (equipment, rooms, teaching material etc.), the capability of the teaching staff i.e. the technical and didactic skill levels of teachers' and instructors', and the starting conditions of those being trained. All these issues require careful and precise analysis so that the curriculum structure and elements can be adequately determined.

Taking account of societal objectives

Both the education/ training systems and the curricula are influenced by standards and values prevailing in society. A curriculum, for example, may reflect common attitudes towards learning, which, in turn, are closely linked to the esteem and social status of the educational end results of curricula ("the degrees"). Social values are also mirrored in the social standing of teachers/instructors or in what students, trainees/apprentices and parents expect from education and training.

Taking account of the employment situation - the labour market

The employment situation has a significant impact on the structure and elements of a curriculum which - as in training for employment - aims at imparting the skills needed in working life. Therefore, in the development of curricula, one has to carefully assess the following questions:

- What kind of job is the training for? The formal or informal job definition describes the type and scope of the tasks to be carried out. It is, therefore, essential that training contents are adjusted to the qualification requirements defined by the work organisation.
- How is the work process organised? Do the hierarchical structures in production and service organisation and the technology used at the workplace leave room for an individual work place design? Which specific qualification requirements does this include?
- Which requirements concerning scope, depth and quality of work derive from companies' production and service structures in the various sectors of industry? Which qualifications are necessary in order to produce high value goods and services and how do they effect the curriculum objectives?

The type of activity or job, the organisation of practical work, e. g. at the master system of an assembly line or in department store management, are significant points of reference for determining the overall and the detailed structures of a curriculum as well as the contents and aims of single elements.

Taking account of the economic situation

Finally, the country's economic structure and the work organisation in the individual sectors of its production or service industry play an important role in curriculum development. Production organisation, for example, differs widely from sector to sector and so do operating structures, technologies or labour market conditions. These differences must be taken into account so that curricula can be developed in compliance with workplace requirements and market needs. Therefore, work-oriented curriculum elements adjusted to individual economic sector needs are a major prerequisite for the "suitability" and value of a curriculum. Any such work-based elements in curricula must relate to the work situation in the target sectors and make it possible to acquire the qualifications relevant to these sectors.

These four factors represent basic conditions for determining the curriculum's structure and designing its elements. They build the scenario of the world in which the curriculum has to function and provide important decision making tools for

- grading of qualifications requirements;
- defining the level of knowledge and skills specialisation;
- determining fine-tuned goals and curriculum contents;
- describing the breadth and depth of the knowledge, skills and abilities to be imparted;
- selecting the learning and teaching methods to be applied, and
- estimating what will be required from instructors and educational facilities'.

The concepts description i.e. the scenario in curriculum development should be as complex as the real life and work process in the specific country or the specific economic sectors it tries to represent. In the end, this step decides which impact the curriculum will have and how appropriate its concepts will be for the social and political life of the country.

Of particular importance are therefore information and research on

- the technical development of work organisation;
- the labour market and employment structure;
- the existing spectrum of professions and fields of activity;
- the development of new fields of employment;
- the countries' educational and training situation and the societal objectives of education and training.

2. *Information gathering methods - Monitoring tools - "Developing demand for qualification"*

The qualifications which young people acquire during the transition from school to work have a key function for the economic and social development of society. Neither the academic community nor the government, neither employers nor trade unions are able to make precise forecasts about future qualification demand or to translate such demand into training and further education. In times when far-reaching change affects all areas of life, special efforts are required to safeguard the future orientation of occupational qualifications by realising early which changes will take place.

In Germany, government, industry, trade union and vocational training research in the Bundesinstitut für Berufsbildung (BIBB) jointly plan and define aims, content, duration and the qualification levels of vocational training and further education. This consensus approach has received world-wide attention. Together with the social partners, the government agrees on future job qualifications and assures employers and trade unions of its co-operation in carrying out necessary corrections to these plans in the future. Such an approach is willingly accepted by training companies and trainees. In contrast to approaches in many other countries or purely state-planned vocational training systems, such consensus prevents finger pointing when unsuitable impractical plans have been devised which fail to take into account the needs of economy and the young people to be trained.

However, it requires a procedure which indicates at an early stage whether and how occupational skills have to be updated. Such a system has to monitoring early indicators for change in economy and administration and their impact on qualification. It should allow the vocational training system to respond earlier and should improve the quality of information for curriculum development.

How is this done in Germany?

Firstly, a broad range of information must be compiled, analysed and assessed. These data can come from micro censuses, employment statistics and from socio-economic surveys of various research institutions. On the basis of these sources the Qualification Structure Report can then be worked out which shows the economic dimensions of qualification structures and their future trends.

This Qualification Structure Report condenses all the data from the various sources into a format which helps to prepare decision making in curriculum development. Of course, data relate to the time in which the curriculum will become operative. So they are forecast. de Grip's paper in this publication argues that whereas quantitative forecasts so far ahead are very unreliable, qualitative indications are possible. Such qualitative information may be obtained through :

- analysis of job advertisements including advertiser interviews;
- surveys in companies on their change in qualification requirements;
- analysis of offers for further training in regions and companies;
- survey on the development of the qualification demand in new fields of occupation.

The developments and trends highlighted by these analyses are meant to provide reliable information for developing curricula structures and elements. In addition it seems reasonable to set up an "expert system for qualification trends" in which vocational training practitioners and experts monitor the development of qualification requirements in certain fields of work and employment and disseminate their conclusions as soon as possible. These results then provide transparent and differentiated foundations for decisions on curricula development.

3. *Standards and structures for curriculum development*

Today structural change means: global economic integration, dynamic acceleration of advances in technology and productivity, dismantling of traditional production, service and market structures and as a consequence loss of jobs and employment openings. However, in the end, this structural change also means: new and different types of employment and jobs.

These are still only on the verge of their appearance and to date only their hazy outlines can be recognised. We can therefore only speculate on the new jobs and fields of employment in the future science and information society, and the quality and quantity of future work trends is anybody's guess. Therefore, today's challenge is how to manage and structure the transition period.

However by structuring this transition, we set the course for the future. This applies to traditional industrialised countries and to development countries with their rising power. Qualification plays a key role here. Never before have competence and the development of competence on the job contributed in such a significant manner to managing economic structural change. Competence and professionalism are essential in a society capable of innovation, and they are a prerequisite the importance of which cannot be overestimated if new types of jobs and chances for employment are to be created.

The central task in modernising occupational training is to build up and extend systems which support people, companies and enterprise as well as social organisations and institutions in coping with the dynamics of the structural change and the transition to the knowledge and information society. As shown in chapter 2, it is not enough to develop procedures which, through early detection of coming changes, ensure that job qualifications are kept up-to-date. A further requirement is the development of curricula in vocational training with dynamic qualification profiles. The structural elements of such dynamic curricula are:

- Basic qualifications and the related differentiated and dynamic competence profiles;
- Sets of mandatory core qualifications combined with different special qualifications (combination of compulsory and optional qualification units);
- Special qualifications differentiated according to the fields of work and employment.

Two requirements for modernisation are linked in these structural elements:

1. Standards are defined for broad-based professional competencies and the creation of differentiated dynamic qualification profiles.
2. The competence profile can be configured by combination and variation in occupational training. This creates a potential for flexibility and allows to cope better with the continuous changes in job requirements and the merging of qualification areas. Thus there is less pressure of continued updating.

One of the consequences of making qualification profiles dynamic is that qualifications are no longer described in the form of detailed learning objectives catalogues, the structure of curricula. Inevitably, curricula become more condensed and more abstract. The qualifications described in vocational training curricula standardise a competence profile. How these qualifications are to be acquired is decisive for the quality of this competence profile. If previous catalogues of learning objectives no longer provide a quality-assuring framework, then curricula development must focus even more on the question of how qualifications can be obtained. The more abstract the definition of training contents, the more curriculum planning has to deal with the question of how this contents can be learned and what is the objective of the curriculum . To solve this problem, we may need new forms of qualification descriptions in vocational curricula.

Other qualitative features in curriculum development refer to standards defined in the respective curricula. Today's terminology distinguishes between

- professional standards i.e. a set of qualifications which, taken as a whole, are the basis for the ability to do a given job, and
- work standards referring to specific jobs, thus describing partial qualifications as compared to the more comprehensive occupational standards.

Both models, which reflect different approaches towards vocational training are subject to policy decisions:

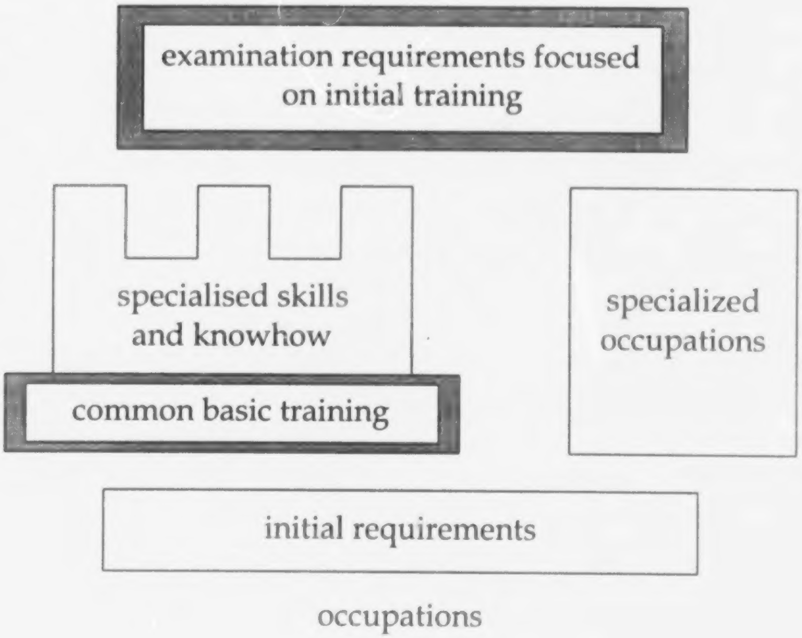
a) the Model of Occupations (Berufsmodel)

The Model of Occupations starts out from a matched set of knowledge, skills and capabilities which, taken together, form the vocational profile. The occupational standards can be defined in a broad manner, including a variety of elements, or can refer explicitly to specialised skills and know-how. As shown in the following figure, there are two possible approaches within the Model of Occupations :

- Definition of occupations with a common basic training on which specialisation can build,
- Definition of specialised individual occupations.

Both approaches define the mandatory learning contents. At the same time, they specify the duration of vocational training, entry and examination requirements.

Fig. 2:

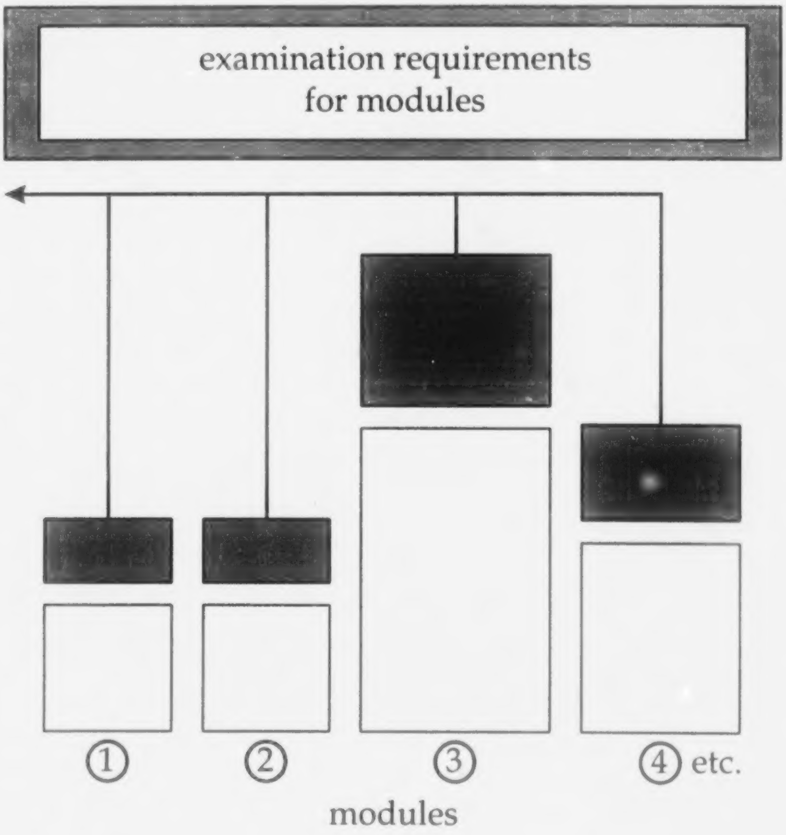

examination requirements focused on initial training
specialised skills and knowhow
common basic training
specialized occupations
initial requirements
occupations

- Requirements on the content of vocational training.
- Initial requirements.
- Qualifications required by trainers.

b) the Module Model

The Module Model defines qualification standards for specific jobs i.e. the training and examination requirements . The jobs can be complex or simple and broadly or narrowly defined. In developing individual job modules, however, qualification standards may not be adequately matched or they may lose transparency. This can be changed by focusing on a occupational standard which is composed of a range of module qualifications, i.e. a combination of module models.

Fig. 3:



Modules for jobs and groups of tasks, which can be combined

Standards in vocational training include all requirements concerning:

- qualification level,
- training contents,
- training length,
- examinations,
- teaching material,
- training basis,
- level of education.

4. *The importance of key-qualifications or core skills for the challenges of the global market and increasing flexibility*

Ever more complex demands at work and in society, as well as the rapid changes in the working world make familiar curriculum patterns obsolete. A generally excepted reliable curriculum model suited to replace traditional proceedings has not yet been developed. However - as described in chapter 3 - a change in the basic curricula structures is emerging which could be fundamental for future-oriented vocational training.

The new curricula structures also include - as shown above - new curricula elements. Core qualifications, i.e. qualifications of a general nature needed for problem-solving in an occupational environment are becoming increasingly important. Qualitative information for modern curriculum development thus has to include information concerning the concept and the meaning of key qualifications and core skills.

The concept of core or key qualifications ('Schlüsselqualifikationen') has been introduces by Mertens in 1974 . So the idea is not new. It has in fact always been there and has also always played a role in the discussion of teaching aims and content. In the meantime, closely related terms have entered into the discussion. Examples are basic qualifications, transferable qualifications and process-independent qualifications. Comparable concepts in the English-speaking world are key qualifications/core skills (UK), generic skills (Canada) and survival skills (US).

In my view this is an interlacing of different concepts which all refer to (the increasing importance of) two essential dimensions of the qualification profile : flexibility or transfer capability and problem-solving ability or ability for expression. The concept of key qualifications/core skills, too, points in the direction of qualifications which on the one hand make a person sufficiently flexible to cope with changing requirements and on the other capable to master and even shape these requirements .

During the 80's the discussion on key-qualifications/core skills became popular again. For it was assumed that qualification requirements in firms and institutions were changing to a large extent as a result of the introduction of 'new production concepts'. Modern qualification theories increasingly see key qualifications/core skills as an essential part of proficiency. In spite of realising that the term key qualifications/core skills circumscribes an extremely complex field , the Inquiry Commission of the German Bundestag states that in the future key qualifications/core skills should be regarded as a central aim for vocational training (Deutscher Bundestag, 1990). According to the commission, this will result in far-reaching changes in accentuating learning content, shaping the learning process and the role of trainers and lecturers. Key qualifications/core skills in other words are also becoming popular with policy makers.

There appears to be agreement on the increasing importance of core skills. It is accepted - as we saw - that these are transcending qualifications, in which integrate technical, methodological and personality/social to a new quality - the ability for competent action. New in today's discussion is that it is not so much driven by educational policy but by labour market policy and socio-economic considerations. The reason lies in the problem to forecast which VET contents will be needed in the future and which qualifications will be the best basis for future updating and specialisation. Of particular importance are the emerging qualification requirements resulting from new production concepts. Rapidly increasing interlacing of operational processes, flexibilisation within work organisations and trends towards integrated functions necessitate holistically structured skills ('ganzheitlich strukturierte Fähigkeiten').

In my view this point is crucial. Therefore I will add some further comments. The general emergence of qualification requirements in terms of core skills is not to be doubted. The question is whether such qualifications on their own are sellable on the labour market. In other words what precisely is the significance of qualification requirements in terms of core skills requirements in firms and institutions? What consequences have they in principle for the introduction of the core skills concept into vocational education? In any case there is sufficient reason to closely watch developments in industry.

For transferring core skills learning situations have to be arranged in such a way that they contain many opportunities for generalisation. At the same time there is agreement that core skills can only be meaningfully imparted in connection with concrete professional/technical qualifications. Otherwise core skills cannot contribute to the desired transfer, and they are no more than empty shells (Bundestag).

Core skills for themselves cannot be regarded as an object of vocational education but instead as a training principle. This means that core skills are concerned more with the didactic and methodological 'how-to' of learning processes in which concrete contents are transferred. Also a one-off experience is not sufficient: core skills must be constantly exercised. This means that the core skills view point has to influence the definition of learning methods, learning material, testing methods and curricula for training the trainers and lectures.

In a number of aspects the German discussion on core skills differs from the more Anglo-American discourse. This is partly due to the strong demand and labour-market orientation in the Anglo-American approach and the general education concept ('Bildung') of the German VET tradition. But also a differences in significance and structure of vocational education seem to play a role. Although there are concrete projects for the introduction of core skills into the practice of both initial and continuing/further vocational education, very few little is available in terms of systematic evaluations.

5. *Conclusions*

As shown in Chapter 1 future oriented vocational education and training requires a multitude of quantitative and qualitative data and information. Only on this firm basis robust curricula for initial and continuing training can be built. Information on the structure and trends of the labour market and the employment system are especially essential for the solidity of a curriculum.

However we have to face the problem that know-how is becoming obsolete in ever shorter times. Therefore traditional procedures for curriculum development should be questioned. We increasingly need new procedures which provide early detection of change and long-term projections and ensure that the curricula remain up-to-date. Chapter 2 outlined which indicators may give us timely information on the future qualification demand of companies and the employment system. Nevertheless it is not certain, that these indicators are able to supply a sufficiently differentiated picture of the future trends of qualification requirements to provide a solid basis for curricula development.

There is now doubt that the evolution of technology and the ever faster changes at the workplaces in many sectors lead to profound changes in qualification requirements. These mainly concern the contents of vocational training, the depth and width of the required competencies as well as the level of cognitive pre-requisites for transferring the new curriculum. Over the last years new curriculum elements have become increasingly important. Most prominent among these are the core qualifications i.e. qualifications of a more general nature necessary for finding universal solutions for professional tasks. This has revitalised the discussion of the key competencies concept. So far pragmatic attempts are prevailing which lack sound theoretical underpinning and analytic evaluation. Nevertheless the models and ideas connected with this concept have gained acceptance on all levels (see Chapter 4).

However, new curriculum elements such as core qualifications alone are not sufficient to make up for the shortcomings of the forecasts on labour market and qualification developments. In order to keep pace with the dynamics of structural changes we need vocational curricula with dynamic competence profiles and a high degree of flexibility. Together with improvements in the early warning systems and the development of universal curriculum elements, dynamic competence profiles are an essential qualitative challenge for curriculum development and hence an important contribution to improved relations between the vocational training system and the labour market.

Linking labour market analysis to vocational training decision-making: dynamics and mechanisms

(Danuta Moźdźeńska-Mrozek)

> *The human resources represent the most important source of the wealth of nations. The capital and natural resources are passive factors of production. That is man (human beings) who accumulate capital, exploit natural resources, create social organisations and promote development.*
>
> *(F. H. Harbison)*

I. Introduction

1. Changes in VET in Poland

One of the important preconditions for economic growth in countries in transition is the reform of the vocational education and training system. However the various activities undertaken in these countries, both by the state and by educational institutions, directed towards this aim are confronted with financial, legal, and conceptual difficulties.

In Poland the first three years of transformation (1989 - 1992) were a period of economic recession and declining living standards. The recession ended more or less in 1993. From then on there was steady economic development. During the last four years economic growth averaged 5% - 7% annually. The period of the transformation was disastrous for the system of education in general and of vocational education in particular. The economic restructuring and transformation, and especially the privatisation process caused almost an elimination of the vocational schools which before 1989 had been supported by state factories and enterprises.

2. Designing new solutions to VET from a labour market perspective

The establishment of links between the labour market and VET could already be observed at an early stage of the transformation period.

This was partly due to massive unemployment. The enormous reserve of labour that was created[40] consisted mainly of redundant workers from technologically obsolete sectors of industry and of school-leavers seeking employment in a shrinking labour market[41]. It was apparent that there was an urgent need to make these people -employable in a market economy by upgrading and/or updating their skills. On the other hand, as the development of market mechanisms continued , resulting in an economic revival and the creation of many new enterprises as well as privatisation and restructuring of state enterprises, the need emerged for new skills and qualifications determined by modern technological requirements and by high quality goods which are decisive for enterprise competitiveness.

Economic growth since 1993 has greatly reinforced the demand for highly skilled labour , capable of working in a competitive international environment[42].

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[40] In the period 1990-1994 the unemployment in Poland reached 3 million (17% unemployment rate)

[41] Between 1990 and 1993 the number of jobs decreased by 2.7 million.

[42] As Poland has been and is applying for membership in European Union.

In these circumstances it became clear that the vocational education and training system, based on the former socialist system, was too obsolete to meet the new requirements.

In 1993 VET system began to adjust to the new needs of the labour market. The changes in both organisation and programmes are based on new legislation which introduced the principles of decentralisation of educational management and the participation of the private sector in this area.

From a legislative perspective the following are the most important acts:

- Local Government Act (1990).
- Education System Act (1991, 1995, 1997).
- Regulation of the Ministry of Education and of the Ministry of Labour and Social Policy on improvement of vocational qualifications and general adult education (1993).

Each of these acts has had a strong impact on VET. Moreover the private sector entered the education market.

The responsibility for elementary schools had been transferred from the Ministry of Education to local government authorities. Decentralisation further encompassed all schools above elementary level. Early in 1997, public schools were officially handed to local authorities in 47 cities

Another phenomenon was the growing role and interest in VET of the labour offices network which organises and finances vocational training for the unemployed and also tries to influence the reshaping of VET system in Poland.

At the early stage of the process which Poland is currently experiencing, links are being created between VET and the labour market. There are two ways of presenting this phenomenon:

1. direct communication and co-operation between training authorities and employers ;
2. collection and dissemination of labour market information to VET decision makers.

II. Direct and indirect co-operation between training authorities and employers

1. Governmental initiatives for the creation of institutional and programme co-operation between the education sector and the labour market

After the recent changes in the socio-economic background of the Central and East European countries within which vocational education and training functions, there is an obvious lack of mechanisms and intermediary institutions which can create the various links between skill users (enterprises) and skill producers (educational institutions). However it is also clear that the establishment of such mechanisms and institutions to support the development of contacts between the main actors in the labour market will take many years in the transition countries. During recent years there have been many initiatives in Poland to establish f formal and informal contacts between employers and educational institutions.

At the national level, the Ministry of Labour and Social Policy plays a key role in initiating such co-operation. At the regional level the same role is performed by the public employment service.

In order to create links between the labour market and VET, certain institutions have been created. Co-operation programmes and other initiatives designed to create the mechanism for information exchange and co-operation have been worked-out.

At the national level, legislation has been introduced. In addition various consultative bodies, interdepartmental working groups and governmental programmes directed at solving some of the crucial social issues have been established.

Legislation

The importance of legislation must be emphasised. New laws are enacted by the Parliament, which also takes care to ensure that the existing legislation reflects the dynamism of the changes taking place in the above mentioned areas.

New regulations have constantly been worked out both in the education sector and in the labour market. The existing legislation has been reviewed and, where necessary , updated or revised. So far the Act for the Education System has been revised twice and the Act for Employment and Counteracting Unemployment has been changed 19 times. Every revision enriches both Acts with new provisions on common objectives and actions in favour of the labour market and of employment policy.

Consultative Bodies

1. *Employment Council*

In 1990 Employment Councils were introduced as advisory and consultative bodies on three different levels:

- National Employment Council (at the Ministry of Labour and Social Policy) at a national level,
- Voivodeship Employment Councils at a regional (Voivodes) level,
- Local Employment Councils at a local level.

The statutory objective of the Employment Councils is to provide a forum for discussion and exchange of information between social partners with regard to changes in the labour market, employment and unemployment. The Councils are quadripartite bodies where trade unions, employers organisations, government administration (including the educational authorities) and local governments are equally represented. A three tier structure of Employment Councils reflects the decentralisation trends in labour market policy.

National Employment Council (NEC)

Within the *NEC*, employment policy (formulated by the Ministry of Labour and Social Policy and implemented by the labour offices) as well as the allocation of the Labour Fund expenditures for reducing unemployment are discussed. Members of the *NEC* express their opinions on draft legislation and government programmes prepared by the Ministry of Labour and Social Policy and the National Labour Office. They can propose programmes initiatives and organisational changes in the labour market.

During the last t two years, the *NEC*, recognising vocational education reform as the main component of a youth unemployment strategy and improvement of the skills of the labour force to the needs of international labour markets, has widened its agenda to include adjustment of VET to the needs of the local labour market.

Discussion within the *NEC* with regard to the situation in vocational education and to the possible ways to speed-up its modernisation. are based on papers prepared by the Ministry of Education and other ministries.

The following are examples of the concrete effects of the *NEC* activities in creating links between labour market and VET:

- placing an order on employers for an assessment of changes in VET (1997);
- debate on employment and economic effectiveness of vocational training courses for the unemployed (1996, 1997);
- discussion on employment service activities to support changes in VET, to prepare school-leavers for entering the labour market and how to deal with employers (1997);
- support for several applications for the co-financing of the modernisation of local vocational training centres at vocational schools (1996, 1997);
- support for applications for co-financing of foreign assistance programmes aimed at training occupational instructors (1997);
- application to Parliament by the Minister of Labour and Social Policy and NEC for treating the VET reform as a priority in legislative activities (1997 - Parliament has yet to adopt any resolution).

The NEC sits once a month.

Voivodeship Employment Councils / Local Employment Councils

Basically these councils focus their work on the same issues as *NEC*.

The main objectives of *VECs* and *LECs* are:

- initiating undertakings aiming at employment growth in Voivodeships / local area;
- expressing opinions on financial plans and reports worked out by VLOs and LLOs;
- evaluating the effectiveness and rationale of Labour Fund resource management;
- expressing opinions on curricula and the direction of vocational education and training in the light of the needs of Voivodeship/local labour market.

At the regional level, basic arrangements are made concerning the scope for co-operation between the educational authorities and regional labour offices on determining the curricula and the direction of vocational education and training. LECs approve inter alia the amount of the Labour Fund resources to be allocated to vocational training for the unemployed.

VECs and LECs convene several times in the course of a year but at least once every three months.

At regional and local levels, VECs and LECs' members take concrete initiatives with regard to changing or modifying curricula in vocational schools, closure of some schools and/or opening of new schools.

The experience of several year shows that the problems of VET are more and more on the employment councils' agendas even where the unemployment problem is still predominant.

Employment Councils provide a forum for the exchange of information prepared by the government administration (labour and education) at central and local levels, training institutions, non-governmental organisations and research institutes.

2. *Tripartite Committee*

In 1994 a Tripartite Committee for Social and Economic Affairs was established. It was designed to provide a forum for dialogue and agreements between the government and the social partners on the direction of socio-economic policy and methods of implementation.

The tasks of the Tripartite Committee include:

- monitoring economic processes and fundamental macro-economic changes,
- evaluating mechanisms and instruments applied in socio-economic policies,
- expressing opinions and making recommendations on social and economic policy priorities, in particular on wage policy, employment policy, benefits policy, the consumption to investment relationship and consumption pattern policy, and
- performing other tasks described under separate regulations.

An analysis of the Tripartite Committee records indicate that its members have focused mainly on the issues connected with:

- wages (minimum and average pay),
- redundancy and social protection of workers,
- negotiations on working conditions (Labour Code revision),
- strike regulations

Governmental working group

In 1993 an Interdepartmental Team for Labour Resources (ITLR) was created in order to ensure the co-ordination of the activities of various government agencies and to integrate them with the needs of economy and with the changes in labour resources. The following ministries and agencies are represented: Ministry of Labour and Social Policy, Ministry of National Education, Ministry of Finance, Ministry of Economy, Ministry of State Treasury, Ministry of Agriculture and Food Economy, Main Office for Housing, Government Centre for Strategic Studies, Central Statistical Office, Scientific Research Committee, Plenipotentiary for the Disabled, National Employment Council and the National Labour Office.

The ITLR tried to devise mechanisms of co-operation in VET, in the process of skill-changes and updating of skills. It also tried to diagnose the labour market and unemployment situation as well as to initiate the review of scientific research in this field and to prepare the expertise on the state of information in Poland by the Scientific Research Committee.

As a result of these activities, the ITLR has recommended that the Central Statistical Office undertake a study on the supply function of the labour market, and to include the social and occupational characteristics of the unemployed population .

It was the Team's initiative to draft a government programme for combating unemployment (1993) and youth unemployment (1995). In both cases the Minister of Education has been obliged to work out a concept of vocational and permanent education reform. Both programmes are discussed in more detail in the next paragraph.

ITLR is a governmental body reinforcing the decision processes, including those in favour of VET development and reform. Nevertheless it must be emphasised that the ITLR's activities are not sufficiently systematic because the body meets only twice a year.

Government Programmes

Government's programmes for combating unemployment constitute attempts to adopt legislative, organisational and program solutions adaptable to the changing labour market situation during the transition period. The main ones are:

- "Government Programme for Combating Unemployment and Mitigating its Negative Effects" -adopted by the Council of Ministers in 1993;
- "Government Programme of Action for the Disabled and for their Integration in the Society" - adopted by the Council of Ministers on 5 October 1995;
- "Promotion of Vocational Activity of the Youth" a programme for reducing youth unemployment, adopted by the Council of Ministers on June 1995.
- "Government Programme of Employment Promotion and Stimulation" on September 1996

Each of these programmes contained an education component. The issues of vocational education have been addressed in the broadest way in the Programme of Combating Youth Unemployment and the Programme of Employment Promotion of 1996. Since it is beyond the scope of this paper to describe in detail each of these programmes, the focus will be on the concept of vocational training laid down in the programme of 1993 and on the youth unemployment programme.

The 1993 programme contains an innovative but costly concept of vocational education and training of unemployed school-leavers based on f job offers in the free market. It has been implemented through a pilot project in the Pzock Voivodeship, but it was not adopted for wider dissemination due to the lack of clear linkages with the skill needs of the labour market. The pilot project is known as "Pzock experiment of 1994".

The education component in the "Promotion of Vocational Activity of the Youth" programme contained mainly an analysis of the current stage of the vocational education reform:

- limitation of education in basic vocational schools (decrease of the number of schools and pupils in the schools whose skill profile is over-represented in the unemployed population).
- development of some skills according to the new classification of occupations to promote the multi-skilled occupations

- development of the range of vocational school activities by adding new responsibilities related to the re-training of the unemployed,
- re-creation of favourable conditions for practical training (through the modernisation of school workshops),
- creation of the new training institutions, e.g. Practical Training Centres.

The youth programme also contained some incentives to encourage occupational training for the youth as well as some incentives to help the employers to employ school-leavers such as on-the job-training, fellowships to continue education, reimbursement of the costs of training and the hiring of school-leavers.

Since this programme started in 1996 it is too early to evaluate its results.

2. *Identification of decision makers in the VET and labour market area*

Decision makers in the VET area

Decentralisation of education management after 1990 resulted in the establishment of a new system of decision making in the VET area, who influence educational policy at various levels and to a different extent.

1. The Parliament indicates and accepts the directions of changes in educational policy drafted by the ministries (of Education and others), determines priorities in the distribution of public resources , evaluates the results of Government activities (through acceptance of the annual budget). Parliament also initiates new objectives and forms of activity by the central administration through parliamentary clubs, parliamentary committees and MP's questions.

2. Ministry of Education (with a similar structure to the education authorities in Voivodeships) in collaboration with other ministries responsible for vocational education, such as Ministry of Health (medical schools), Ministry of Agriculture and Food Economy (farming schools), Ministry of Industry (mining and steel industry schools), Ministry of Culture (artistic schools) etc.

   The Ministry of Education takes decisions on:

   - options and/or types of reforms and changes in vocational education policy,
   - shifts in proportions between the number of vocational schools and general secondary schools,
   - prolongation of education cycle, maintaining the balance between general objectives of education and the range of specialised knowledge in vocational education

   In the current trend towards f decentralisation, the above-mentioned functions are gradually transferred to Voivodeship educational authorities.

3. Local government supervises the number of vocational schools in its area and their modernisation. Local governments control also the salary increases for teachers and initiate changes in curricula.

4. University rectors: In the framework of full autonomy of universities, the rectors of state (and also private) universities influence the quality of education through the selection of professors and other staff, through changes in curricula, by the introduction or liquidation of certain courses and through setting the upper limit on the number of new entrants accepted each year.

5. School directors: The directors are responsible for the quality of education through the hiring of teachers, curricula recommendations and the increase or reduction of the number of courses.

   Under the Act on the Education System "the director of a vocational school may, in consultation with the authority to which he is answerable (e.g. the office for pedagogical supervision and the Voivodeship labour office) change or introduce new rules and courses in vocational education in his school". The school director who plans changes in the directions of vocational education should apply through the authorities to whom they are answerable (educational authority - school supervisor) to the Voivodeship labour office to come up with an opinion about the planned changes in or liquidation of a certain school course. Applications should contain a full list of skills that could be acquired as a result of the changes, possibilities of on-the job training and the envisaged number of students that would follow a new or modified curriculum. The Voivodeship labour office, before giving its opinion, should consult the local labour office in the area where the school is situated on such issues as:

   - number of the unemployed qualified in a profession that is planned to be introduced in a school,
   - demand of the local employers for the profession in question;
   - employment possibilities based on the regional economic development plan.

6. Training institutions

   These institutions offer education services in accordance with free market principles. They are fully independent in the programmes they offer and also bear the full risk of meeting the demand for educational services.

   For obvious reasons the decisions taken by the above mentioned decision makers are always limited by the availability of financial resources.

Decision makers in the area of labour market policy

- Parliament (Sejm).
- Ministry of Labour and Social Policy.
- National Labour Office + 49 Voivodeship Labour Offices and 365 Local Labour Offices (Labour Offices Network).

Employers - skill users

Considering the degree of interest by employers in obtaining higher qualifications for their employees and their ability to assess precisely the qualities and skills of new employees sought by them in the labour market, it is necessary to differentiate between several groups of employers:

1. in terms of their economic prosperity, employers of prospering enterprises (in joint ventures with foreign companies), and
2. recently privatised and restructured enterprises which have not yet achieved economic growth.

When considering the size and type of ownership one should mention:

1. the employers - mostly private - who constitute SME, and
2. employers representing large enterprises - private or state owned.

Out of above mentioned groups, employers in the group of large and prospering enterprises and also some of those in the SME sector are the frequent users of skills provided by VET institutions. They are able to assess properly their requirements for new staff in the short and medium term. They also cover - wholly or partly - the costs of improving the qualification of their employees. In this respect an interesting group of employers has been formed by enterprises which represent or are part of internationally operating foreign companies. Examples are to be found in the car manufacturing industry, hotel and catering business, banking and supermarket chains. These employers are applying new technologies and management standards and are also introducing new training programs in order to guarantee high quality products and services.

On the other hand there are those employers who rarely use the services of training institutions They mainly belong to state owned or other enterprises, starting restructuring and privatisation processes, which in many cases have not had satisfactory economic results and are still suffering from excess of staff. Moreover to this group also belong private employers owning micro businesses (up to five workers) whose limited financial means are mostly tied up in investment in their enterprises.

On the whole it is necessary to stress that employers, being undoubtedly among the main actors in the labour market, are still not yet its strongest pillar. In the transition period, therefore, the employment services in Poland are frequently required to perform the role of an intermediary between the skill users and skill producers. This role of the state labour services is facilitated by the financial means at their disposal which they may use to the advantage of both users and producers.

3. *Dynamism and mechanism of VET adjustment to the labour market needs (central, regional and local links)*

To get a clear picture of the ongoing changes in the VET at different levels, it is necessary to introduce at the very beginning the distinction between three types of VET institutions:

1. public vocational schools at post elementary level;
2. private secondary and university level vocational/technical schools;
3. private training institutions.

Assumptions of the vocational education reform [central level]

The analysis of changes must be based on the formal assumptions of the vocational education reform adopted by the Ministry of National Education. These are the result of several-years analytical and conceptual work by mixed teams of Polish and foreign experts.

Two main options for reform have been examined:

1. reform via a single strategic act (as in the sixties and seventies), i.e. the selection of certain structural model of VET that was recognised by the experts as being optimal. The model then became law and was implemented according to the regulations and the resources approved by the state budget.
2. adoption in Poland of a VET model functioning in one of the western countries where socio-economic conditions were similar to those in Poland

However a third option was finally selected namely a gradual restructuring of the system and replacement of those solutions that were no longer effective by new ones. New solutions could be introduced when uncertainty regarding the future economic development was gradually eliminated. Consequently such a strategy is being implemented through two parallel channels:

- by taking steps towards restructuring the existing system to make it operational and effective in the light of new socio-economic challenges.
- through gradual preparation of the elements of a future model as soon as reliable forecasts of the directions of economic development become available and as soon as the expenditures on education and science start to increase. (However for a number of years a slight but permanent decrease can be observed for expenditures on education which at the same time is confronted with growing 'social' demand by both the youth and adults).

Also, owing to the decentralisation process introduced in the education system, the main burden of VET adjustment to the needs of labour market must be carried out at regional and local level.

Regional and local conditions of the changes in VET

At regional and local level the main clients of VET are essentially :

- school pupils and school-leavers;
- the employed;
- the unemployed.

They all have one feature in common: the need to acquire, upgrade or update skills and qualifications that are demanded by the employers.

In recent years, substantial experience shows that private training institutions which t have emerged in large numbers since the beginning of transformation (about 1.400 in 1996) responded in the quickest and most effective way to the changing needs of the labour market. These institutions include country-wide network organisations, regional and local training centres with foreign investment, which organise short courses (1 to 18 months, depending on the skill profile).

Training courses have become one of the principal forms of combating unemployment. Labour offices that represent the interests of the unemployed vis-à-vis employers (through job placements) have established a system of co-operation with training institutions and employers on the basis of tripartite agreements.

School leavers are also referred by labour offices to training courses directly after leaving school (especially from a basic vocational school) in order to upgrade the acquired qualifications or to reshape them.

Regional and local educational authorities provide valuable assistance to the labour offices in selecting training institutions for training of the unemployed. Organisation and provision of certain services in the field of vocational education and training can then be ordered by the labour office in accordance with the Act on Public Procurement. Procurements are usually based on competitive public tendering. The best offer is selected by the Public Procurement Commission established by the director of a local labour office. Representatives of educational authorities are often invited to take part and to provide their expertise in evaluation of the training programmes. The content of the training curriculum is the main criterion.

The rapidly developing system of private higher vocational education colleges (some of which offer 3 year BA degree courses) must be mentioned. Private colleges of management, banking, finance, public relations, administration, international relations, computer science etc. emerged in response to a significant demand by the growing private sector for executive and management staff.

It is worth noting that private vocational institutions - both schools and training institutions - are characterised by both flexibility and capability to respond quickly to the clients) needs.

The weakest response (to changing needs of the local labour market) has been noticed in public vocational schools which cause significant social losses by producing lots of unemployable graduates.

It must be emphasised however that thanks to the initiatives of regional and local governments and of school directors the following changes in vocational education system have taken place:

- closure of vocational schools (particularly in the regions of structural unemployment) whose skill programmes have not adjusted to the new needs;
- establishment of new schools with new skill programmes e.g. schools of economics and trade, tourism, gastronomy, real estate brokerage, in the areas where there is a clear economic revival (particularly in areas around major and medium-size cities),
- replacement of obsolete occupations with new, modern ones.

It must be noted, that given current assumptions on the degree of VET reforms adopted by the Ministry of national Education, schools and training institutions in the private sector will continue to play the leading role in the process of VET modernisation, at least for the foreseeable future. They will also compensate for the shortcomings of the public system.

The weakest element in the chain of partnership and co-operation in the labour market at the local level are the 'social partners' - trade unions and employers' organisations.

Parents also have a greater role to play as a "pressure group" in order to influence a more rapid reform of vocational education.

It should also be noted that, in addition to the main elements of the decision making mechanisms in local and regional educational policy outlined above, there are numerous informal contacts between enterprises and training institutions established through the increasing number of personnel departments in enterprises and through promotion units in the training institutions. These sorts of contacts influence to a great extent the modernisation of curricula and training programmes and their adjustment to actual demand. So far the process of establishing links between education and the labour market at a local and regional level is rather spontaneous and tends to serve immediate needs.

The following conclusions should be drawn from the picture outlined above:

1. changes in the content and quality of vocational education proceed much quicker at regional and local levels;
2. experience gained at lower levels of vocational education management can be used to influence future policy in the area of VET reform at the national level.

III. Collection and dissemination of labour market information to VET decision makers (at the central, regional and local levels)

One of the key elements in adjusting curricula content in vocational education to the labour market needs is access to information on the labour market. Some of the details are:

1. Labour market information producers and scope of labour market analysis (national level)

a) Under Polish law

- the Central Statistical Office (CSO), and
- the Labour Offices Network (LON)

collect and process all information concerning the Polish labour market.

The Central Statistical Office is a government agency appointed to collect and process economic and social statistical data. Its responsibilities include the planning of statistical surveys, keeping registers of business enterprises in local areas, and keeping records of working conditions and of employment trends.

The Labour Offices Network keeps records of registered unemployment in Poland. These include data on the level, structure, and dynamics of unemployment, breakdown of the unemployed population by trades and occupations according to their social and demographic features, and the study of business organisations in keeping up with the European Classification of Activities (ECA).

The central labour market statistics are collected monthly, quarterly and annually.

The CSO has a leading role in information collection and processing. Yet neither the CSO nor the Government Centre of Strategic Studies play the role of co-ordinator in information exchange. The CSO role is mainly to guarantee the quality and reliability of the collected data.

b) Modular supplementary research undertaken by CSO

Labour force survey (LFS) - continuous research on a quarterly basis aimed at determining the features and size of active labour market(employed and unemployed) and passive population by -regions and by socio-demographic characteristics, such as:

gender, age, place of residence, education level and economic status. LFS helps the decision-makers to assess the status quo and the direction of changes in the economic activity of the population.

Study of demand for labour - research on the dynamics of employment in public and private sector on the basis of representative national samples. This survey is meant for studying the demand for certain types of education and skills on a yearly basis.

c) **Types of research performed by universities and other scientific institutions:**

sectoral research focused on certain branches of the economy - for example changes in employment in the mining and steel industry, in agriculture, services etc.

Dissemination of information

Published data are distributed to the main central institutions, associations and social organisations (e.g. Houses of Parliament, government ministries, National Employment Council, university libraries) and to similar institutions at the regional level. Unpublished data are disseminated through scientific conferences, seminars, press conferences etc.

2. *Labour market information producers at the regional level*

a) Regional labour market statistics (monthly, quarterly and yearly) is done by Voivodeship branch offices of Chief Statistical Office and by Voivodeship labour offices as part of national statistics.

b) Regional supplementary research is done monthly by Voivodeship branch offices of Central Statistical Office and by Voivodeship labour offices and include a demand for labour force survey by occupations in regional labour market (analysis of registered job offers and job offers announced in public media). Information is provided on the following:

- occupations based on updated information as specified in characteristics of occupations,
- data base of employers,
- data base of job offers,
- regional VET system (vocational schools and training institutions),
- school ranking by employability of graduates,
- employers poll as regards to their demand for labour and skills (short term forecast up to one year).

c) Research institutions provide:

sectoral surveys on local labour markets [e.g. in one town], which are instigated by institutions interested in labour problems, including Voivodeship authorities, Voivodeship Labour Offices, education authorities, training institutions, local and regional governments. They can also be initiated by the research institution .

Dissemination of information

Published data are distributed to Voivodeship authorities, education authorities, Voivodeship Employment Councils, training institutions and some employers.

Unpublished data are disseminated by: scientific conferences, business meetings, seminars, press conferences, mass media etc.

3. *Local information*

Is based mainly on information prepared at regional level and supplemented by detailed information on employers and training institutions as well as on the absorptive capacity of the local labour market.

Information is distributed in a less formal way. It is made available to all interested parties and institutions (employers, and training establishments) on the basis of direct contact between persons and institutions.

4. *Initial preconditions for the links between information on labour market and vocational education system.*

It should be mentioned that this issue should be viewed from several points of view:

- individuals and social groups using the services of VET institutions,
- employers,
- institutions functioning as managers in the VET market.

Information destined for individuals about labour market conditions should be useful not only for the present but should also provide information concerning the future employment and professional situation.

Similarly information on the future labour market is indispensable for VET institutions planning the direction and development of vocational training and education.

In these matters the point of view of employers is different and very specific. The employers need first of all information on the ability of VET to "produce" employees with qualifications responding to the direct needs of the employers. Lastly the information on labour market and the potential of VET system to produce specific skills should also take into account regional and local conditions. They should also be systematic, stable and comparable to other data.

Although one could say that in Poland the f information concerning labour market and its development is quite rich and diverse it is nevertheless insufficient for the precise formulation of trends and prospective needs of the labour market. It is therefore imperative to find an efficient solution which would meet the need for the smooth exchange and flow of data as well as for their co-ordination. No decision has yet been taken. There are, however, at least three models which are under consideration:

First, creation of a new central institution supported by a special network dealing with collecting date and information and above all through co-ordination, sensu largo.

Second, making the market itself the main factor responsible for co-ordinating information and data and responding to the new needs and trends. This would mean a very liberal solution.

Third, giving its special role, its responsibility and necessary allocations of means, to the VET system. This could be done through either agglomerates or a super- organisations that with the authority of the state, assume the role of active co-ordinator, deeply involved in the labour market and strongly co-operating with its other partners.

IV. *Conclusion*

In this paper I have tried to present the emerging links between VET and the labour market, taking into account the problems connected with the general lack of adaptation of vocational education in Poland to the new needs of the transformation period. I have also briefly presented the institutions which are collecting and shaping information on the labour market situation in Poland and the avenues of its supply to the social partners, giving some characteristics of their role and conditions [and limitations] in their activity on the labour market.

Moreover this paper contains an analysis of the initial options which were chosen after 1990 pertaining to the shape and scope of VET reform in Poland. The process of this reform has been initiated and is being implemented but r not yet completed.

The following are some essential factors which may accelerate this process and make it more effective:

- substantial increase in the financial allocations for education and research,
- the enhancement of the quality l and social standing of teachers and instructors [general and VET]growing interest of employers in the development of vocational training in line with the development of their enterprises,
- the development of an information flow system on labour market issues with special emphasis on medium and long-term forecasting. In this context I would like to draw your attention to the concept the school of the future, a type of school which would enable the level of education in Poland to be comparable to the level of education in EU countries. It would also prepare youth and adults for a competitive national economy and an international labour market.

To achieve the above mentioned goal, it is necessary to define the long term policy concerning the continuing vocational education. The concept of educational policy was based on the assumption that both school and out-of-school education, youth and adult education, has to be one consistent system. Only then the professional career of an individual would have a chance to combine with an educational career. The features of a 21st century vocational education system are defined as: openness, accessibility, flexibility, ownership, comparability of acquired qualifications and possibility to update them.

The key purpose of a new educational policy should be educational support for economic development. Therefore according to the new concept of education, the strategic aim of the modernisation of vocational education system, is the establishment of a fully patented and flexible system, responsive to labour market requirements, international standards, and also specific needs of every individual.

The expected result of such system in operation would be the harmonisation of demand and supply of labour force, and at an individual level the- facilitation of the communication between employer and worker in the labour market.

For achieving the above mentioned goals, two main organisational reforms have been defined:

1. Schools and institutions - on the supply side - should offer education in stabilised professions, related to the strategic interests of the state economy, culture and social policy,

2. Schools and institutions - on the demand side - should respond to specific and altering needs of labour market, by initiating various types, forms and directions of education according to demand.

3. Making the continuing vocational education system more stable, by focusing on tasks that do not undergo frequent alterations, would be the function of the demand side. The basis for specifying these tasks is provided by defining priorities for socio-economic development, also in the regional context. In order to forecast educational tasks, the methodology of market prognosis (economic, demographic and social) should be elaborated.

4. Greater flexibility should be the function of the supply side. Long-term prognosis is less significant in this area. The task for educational institutions is filling gaps in stable educational demand and meeting new or sudden demands.

ANNEX

List of contributors

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